

10/689,307

=> file caplus

FILE 'CAPLUS' ENTERED AT 09:07:09 ON 23 NOV 2004

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FILE COVERS 1907 - 23 Nov 2004 VOL 141 ISS 22

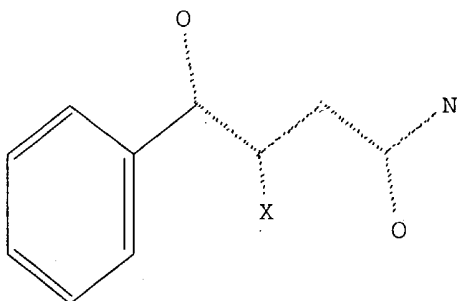
FILE LAST UPDATED: 22 Nov 2004 (20041122/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d que

L1

STR



Structure attributes must be viewed using STN Express query preparation.

L3 111 SEA FILE=REGISTRY SSS FUL L1

L4 29 SEA FILE=CAPLUS L3

=> d l4 1-29 ibib abs hitstr

L4 ANSWER 1 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:308781 CAPLUS

DOCUMENT NUMBER: 140:52730

TITLE: Substituted amides and hydrazides of acylpyruvic acids. Part 9. Synthesis, antimicrobial and analgesic activity of substituted 4-aryl-3-halogen-2,4-dioxobutanoic acid amides

AUTHOR(S): Koz'minykh, E. N.; Belyaev, A. O.; Berezhina, E. S.; Koz'minykh, V. O.; Makhmudov, R. R.; Odegova, T. F.

CORPORATE SOURCE: Perm State Pharmaceutical Academy, Perm, Russia  
SOURCE: Pharmaceutical Chemistry Journal (Translation of Khimiko-Farmatsevticheskii Zhurnal) (2002), 36(12), 643-646

CODEN: PCJOAU; ISSN: 0091-150X

PUBLISHER: Kluwer Academic/Consultants Bureau

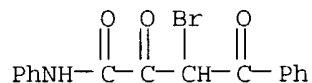
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB Substituted aroylpyruvic acid amides were reacted with bromine and chlorine under mild conditions to obtain a series of new 4-aryl-3-halogen-2,4-dioxobutanoic acid amides. The proposed structures of these compds. were confirmed by the results of IR and <sup>1</sup>H NMR spectroscopy measurements. All synthesized compds. exhibited antimicrobial and analgesic properties. The most pronounced effect was observed for 3-chlorosubstituted derivs.

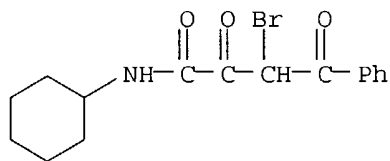
IT 66286-56-4P 638212-38-1P 638212-39-2P  
638212-40-5P 638212-41-6P 638212-42-7P  
638212-43-8P 638212-44-9P 638212-45-0P  
638212-46-1P 638212-47-2P 638212-48-3P  
638212-49-4P 638212-50-7P 638212-51-8P

RL: PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(synthesis, antimicrobial and analgesic activity of substituted 4-aryl-3-halogen-2,4-dioxobutanoic acid amides)

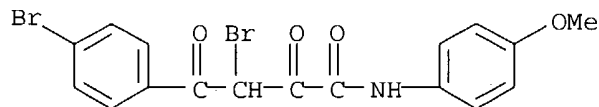
RN 66286-56-4 CAPLUS  
CN Benzenebutanamide, β-bromo-α,γ-dioxo-N-phenyl- (9CI) (CA INDEX NAME)



RN 638212-38-1 CAPLUS  
CN Benzenebutanamide, β-bromo-N-cyclohexyl-α,γ-dioxo- (9CI)  
(CA INDEX NAME)

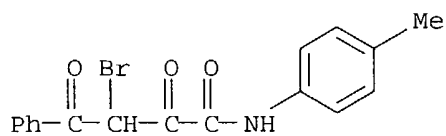


RN 638212-39-2 CAPLUS  
CN Benzenebutanamide, β,4-dibromo-N-(4-methoxyphenyl)-α,γ-dioxo- (9CI) (CA INDEX NAME)



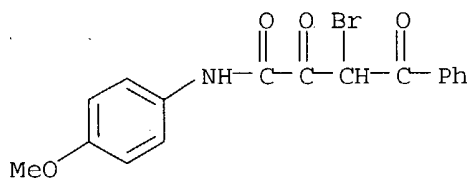
RN 638212-40-5 CAPLUS  
CN Benzenebutanamide, β-bromo-N-(4-methylphenyl)-α,γ-dioxo- (9CI) (CA INDEX NAME)

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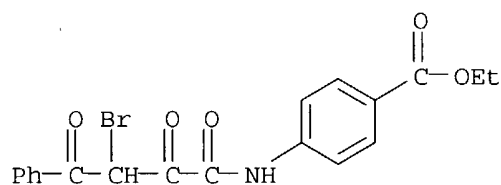
RN 638212-41-6 CAPLUS

CN Benzenebutanamide,  $\beta$ -bromo-N-(4-methoxyphenyl)- $\alpha,\gamma$ -dioxo-  
(9CI) (CA INDEX NAME)



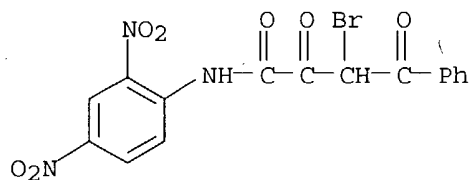
RN 638212-42-7 CAPLUS

CN Benzoic acid, 4-[(3-bromo-1,2,4-trioxo-4-phenylbutyl)amino]-, ethyl ester  
(9CI) (CA INDEX NAME)



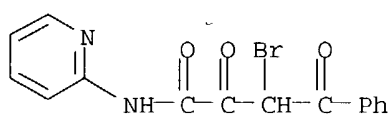
RN 638212-43-8 CAPLUS

CN Benzenebutanamide,  $\beta$ -bromo-N-(2,4-dinitrophenyl)- $\alpha,\gamma$ -  
dioxo- (9CI) (CA INDEX NAME)



RN 638212-44-9 CAPLUS

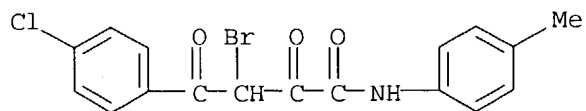
CN Benzenebutanamide,  $\beta$ -bromo- $\alpha,\gamma$ -dioxo-N-2-pyridinyl- (9CI)  
(CA INDEX NAME)



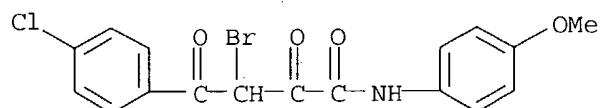
RN 638212-45-0 CAPLUS

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 $\alpha,\gamma$ -dioxo- (9CI) (CA INDEX NAME)

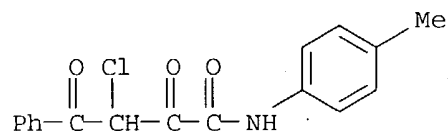
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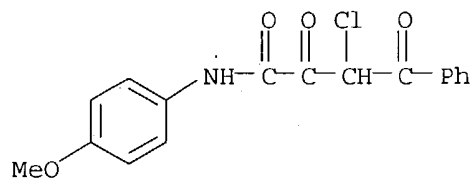
RN 638212-46-1 CAPLUS  
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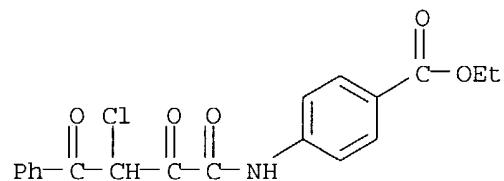
RN 638212-47-2 CAPLUS  
CN Benzenebutanamide,  $\beta$ -chloro-N-(4-methylphenyl)- $\alpha,\gamma$ -dioxo- (9CI) (CA INDEX NAME)



RN 638212-48-3 CAPLUS  
CN Benzenebutanamide,  $\beta$ -chloro-N-(4-methoxyphenyl)- $\alpha,\gamma$ -dioxo- (9CI) (CA INDEX NAME)

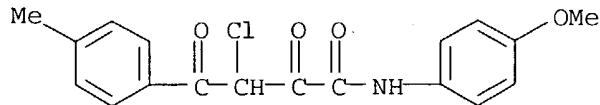


RN 638212-49-4 CAPLUS  
CN Benzoic acid, 4-[(3-chloro-1,2,4-trioxo-4-phenylbutyl)amino]-, ethyl ester (9CI) (CA INDEX NAME)



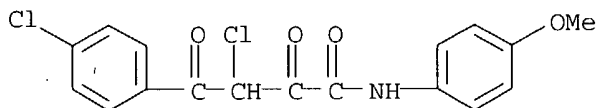
RN 638212-50-7 CAPLUS  
CN Benzenebutanamide,  $\beta$ -chloro-N-(4-methoxyphenyl)-4-methyl- $\alpha,\gamma$ -dioxo- (9CI) (CA INDEX NAME)

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RN 638212-51-8 CAPLUS

CN Benzenebutanamide,  $\beta$ ,4-dichloro-N-(4-methoxyphenyl)- $\alpha,\gamma$ -dioxo- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:552163 CAPLUS

DOCUMENT NUMBER: 131:299405

TITLE: Novel 2-phenylimidazo[1,2-a]pyridine derivatives as potent and selective ligands for peripheral benzodiazepine receptors: synthesis, binding affinity, and in vivo studies

AUTHOR(S): Trapani, Giuseppe; Franco, Massimo; Latrofa, Andrea; Ricciardi, Laura; Carotti, Angelo; Serra, Mariangela; Sanna, Enrico; Biggio, Giovanni; Liso, Gaetano

CORPORATE SOURCE: Dipartimento Farmaco-Chimico Facolta di Farmacia, Universita degli Studi di Bari, Bari, 70125, Italy

SOURCE: Journal of Medicinal Chemistry (1999), 42(19), 3934-3941

CODEN: JMCMAR; ISSN: 0022-2623

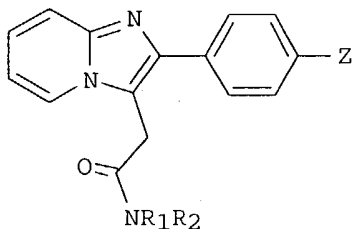
PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 131:299405

GI



I

AB The substituent effects at positions 6 and 8 (compds. I (X = CO<sub>2</sub>Me, CONH<sub>2</sub>, H, Y = H, Me, NO<sub>2</sub>, OMe, Cl, NH<sub>2</sub>, NHMe, NHAc, Z = H, Cl, R<sub>1</sub> = R<sub>2</sub> = Pr)) as well as at the amide nitrogen (compds. I (X, Y, Z = H, Cl, R<sub>1</sub> = R<sub>2</sub> = Et, Pr, Bu, hexyl; R<sub>1</sub> = Pr, Bu, R<sub>2</sub> = H)) of a series of 2-phenylimidazo[1,2-a]pyridineacetamides were evaluated at both central (CBR) and peripheral (PBR) benzodiazepine receptors. The structure-activity relationship studies detailed herein indicate the key structural features required for high affinity and selectivity for PBR. Substitution on the

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imidazopyridine nucleus at position 8 with lipophilic substituents and the presence of one chlorine atom at the para position of the Ph ring at C(2) are crucial features for high binding affinity and selectivity toward PBR. A small subset of active ligands were evaluated in vitro in *Xenopus* oocytes expressing cloned human GABAA receptors for their effects at CBR and in vivo for their ability to stimulate the synthesis of neurosteroids such as pregnenolone, progesterone, allopregnanolone, and allotetrahydrodeoxycorticosterone (THDOC). I (X = CO<sub>2</sub>Me, Y = Z = H, R<sub>1</sub> = R<sub>2</sub> = Pr; X = H, Y = Me, Z = Cl, R<sub>1</sub> = R<sub>2</sub> = Pr; X = H, Y = Z = Cl, R<sub>1</sub> = R<sub>2</sub> = Pr; X = Y = Z = H, R<sub>1</sub> = R<sub>2</sub> = Bu) markedly increased the levels of neuroactive steroids in plasma and cerebral cortex, unlike I- (X = Y = H, Z = Cl, R<sub>1</sub> = R<sub>2</sub> = Bu).

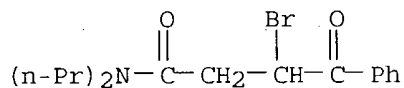
IT 193979-81-6 193979-87-2

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation, benzodiazepine receptor affinity, and structure-activity relationship of phenylimidazopyridine ligands)

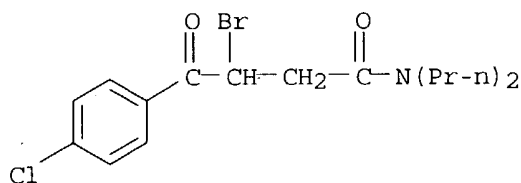
RN 193979-81-6 CAPLUS

CN Benzenebutanamide, β-bromo-γ-oxo-N,N-dipropyl- (9CI) (CA INDEX NAME)



RN 193979-87-2 CAPLUS

CN Benzenebutanamide, β-bromo-4-chloro-γ-oxo-N,N-dipropyl- (9CI) (CA INDEX NAME)



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247085-33-2P 247085-34-3P 247085-35-4P

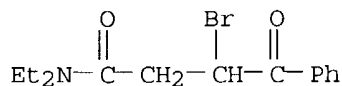
247085-36-5P 247085-37-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation, benzodiazepine receptor affinity, and structure-activity relationship of phenylimidazopyridine ligands)

RN 247085-30-9 CAPLUS

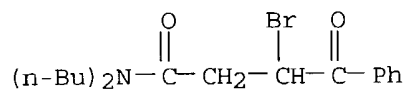
CN Benzenebutanamide, β-bromo-N,N-diethyl-γ-oxo- (9CI) (CA INDEX NAME)



RN 247085-31-0 CAPLUS

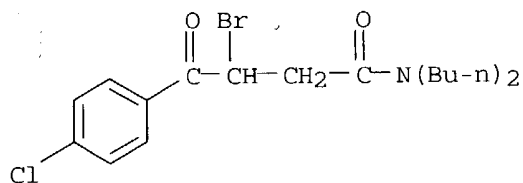
CN Benzenebutanamide, β-bromo-N,N-dibutyl-γ-oxo- (9CI) (CA INDEX NAME)

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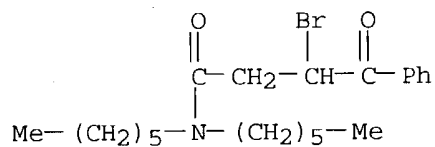
RN 247085-32-1 CAPLUS

CN Benzenebutanamide,  $\beta$ -bromo-N,N-dibutyl-4-chloro- $\gamma$ -oxo- (9CI)  
(CA INDEX NAME)



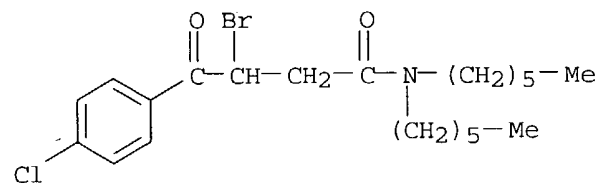
RN 247085-33-2 CAPLUS

CN Benzenebutanamide,  $\beta$ -bromo-N,N-dihexyl- $\gamma$ -oxo- (9CI) (CA INDEX NAME)



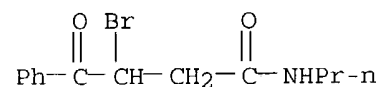
RN 247085-34-3 CAPLUS

CN Benzenebutanamide,  $\beta$ -bromo-4-chloro-N,N-dihexyl- $\gamma$ -oxo- (9CI)  
(CA INDEX NAME)



RN 247085-35-4 CAPLUS

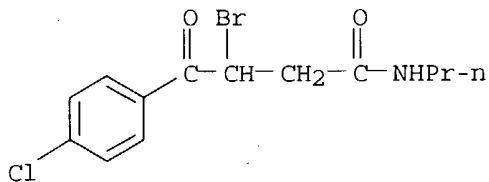
CN Benzenebutanamide,  $\beta$ -bromo- $\gamma$ -oxo-N-propyl- (9CI) (CA INDEX NAME)



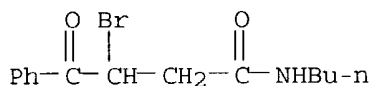
RN 247085-36-5 CAPLUS

CN Benzenebutanamide,  $\beta$ -bromo-4-chloro- $\gamma$ -oxo-N-propyl- (9CI) (CA INDEX NAME)

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RN 247085-37-6 CAPLUS  
CN Benzenebutanamide,  $\beta$ -bromo-N-butyl- $\gamma$ -oxo- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1997:564963 CAPLUS

DOCUMENT NUMBER: 127:176379

TITLE: Synthesis and Binding Affinity of 2-Phenylimidazo[1,2-a]pyridine Derivatives for both Central and Peripheral Benzodiazepine Receptors. A New Series of High-Affinity and Selective Ligands for the Peripheral Type

AUTHOR(S): Trapani, Giuseppe; Franco, Massimo; Ricciardi, Laura; Latrofa, Andrea; Genchi, Giuseppe; Sanna, Enrico; Tuveri, Francesca; Cagetti, Elisabetta; Biggio, Giovanni; Liso, Gaetano

CORPORATE SOURCE: Dipartimento Farmaco-Chimico and Farmaco-Biologico Facolta di Farmacia, Universita degli Studi di Bari, Bari, 70125, Italy

SOURCE: Journal of Medicinal Chemistry (1997), 40(19), 3109-3118

CODEN: JMCMAR; ISSN: 0022-2623

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A number of 6-substituted or 6,8-disubstituted alkyl 2-phenylimidazo[1,2-a]pyridine-3-carboxylates, -acetates, and -propionates and a number of N,N-dialkyl-2-phenylimidazo[1,2-a]pyridine-3-carboxamides, -acetamides, or -propionamides were prepared following new synthetic methods, and their affinities for both the central (CBR) and the peripheral (PBR) benzodiazepine receptors evaluated. The compds. of the ester series displayed low affinity for both receptor types. Conversely, most of N,N-dialkyl(2-phenylimidazo[1,2-a]pyridin-3-yl)acetamides proved to possess high affinity and selectivity for CBR or PBR depending on the nature of substituents at C(6) and/or C(8) on the heterocyclic ring system. In particular, the 6-substituted compds. displayed ratios of IC50 values [IC50(CBR)/IC50(PBR)] ranging from 0.32 to 232, while the 6,8-disubstituted compds. were more than 1000-fold more selective for PBR vs. CBR. The actions of these compds. were also tested on  $\alpha 2\beta 2\gamma 2s$  receptors. However, the EC50 of these compds. was increased, compared to  $\alpha 1\beta 2\gamma 2s$  receptors, by 30-, 4-, and 5-fold. Finally, these compds. were almost completely devoid of activity at receptors containing the  $\alpha 5$  subunit.

IT 193979-81-6P 193979-87-2P

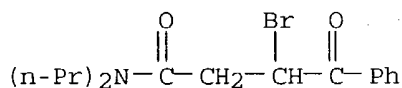


10/689,307

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and binding affinity of phenylimidazopyridines for both central  
and peripheral benzodiazepine receptors)

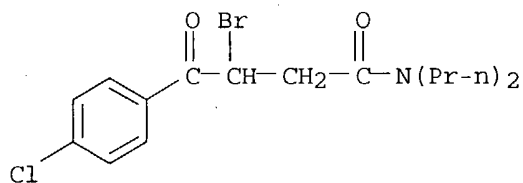
RN 193979-81-6 CAPLUS

CN Benzenebutanamide,  $\beta$ -bromo- $\gamma$ -oxo-N,N-dipropyl- (9CI) (CA INDEX  
NAME)



RN 193979-87-2 CAPLUS

CN Benzenebutanamide,  $\beta$ -bromo-4-chloro- $\gamma$ -oxo-N,N-dipropyl- (9CI)  
(CA INDEX NAME)



L4 ANSWER 4 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1995:114667 CAPLUS

DOCUMENT NUMBER: 122:81024

TITLE: Synthesis of 1-arylazetidin-2-ones using calixarenes  
as phase-transfer catalysts

AUTHOR(S): Harris, Stephen J.; Kinahan, Audrey M.; Meegan, Mary  
J.; Prendergast, Rhona C.

CORPORATE SOURCE: Sch. Chem. Sci., Dublin City Univ., Dublin, 9, Ire.

SOURCE: Journal of Chemical Research, Synopses (1994), (9),  
342-3

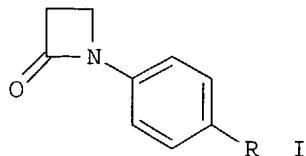
CODEN: JRPSDC; ISSN: 0308-2342

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 122:81024

GI



AB The cyclodehydrohalogenation of 3-halo-N-phenylpropanamides using  
calix[4]arenes as phase-transfer catalysts was studied. Thus,  
2-azetidinones I (R = H, alkyl, halo) were formed in higher yields than  
those obtained with 18-crown-6 as phase-transfer catalyst.

IT 74457-64-0, Benzenebutanamide,  $\beta$ -bromo-N-(4-chlorophenyl)-  
 $\gamma$ -oxo 79353-64-3, Benzenebutanamide,  $\beta$ -bromo-N-(4-

10/689,307

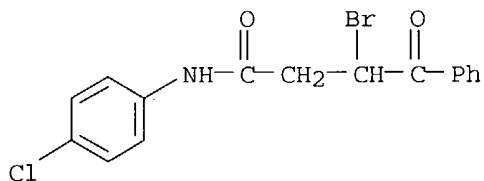
methoxyphenyl)- $\gamma$ -oxo

RL: RCT (Reactant); RACT (Reactant or reagent)

(calix[4]arene-catalyzed dehydrohalogenation of 3-halo-N-arylalkanamides)

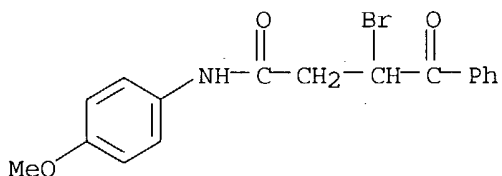
RN 74457-64-0 CAPLUS

CN Benzenebutanamide,  $\beta$ -bromo-N-(4-chlorophenyl)- $\gamma$ -oxo- (9CI) (CA INDEX NAME)



RN 79353-64-3 CAPLUS

CN Benzenebutanamide,  $\beta$ -bromo-N-(4-methoxyphenyl)- $\gamma$ -oxo- (9CI) (CA INDEX NAME)



L4 ANSWER 5 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1993:59649 CAPLUS

DOCUMENT NUMBER: 118:59649

TITLE: Five-membered 2,3-dioxo heterocycles. XXV. Reaction of 4-unsubstituted and 4-halo-5-aryl-2,3-dihydro-2,3-furandiones with benzylideneamines. Effect of reagent structure on reaction pathway

AUTHOR(S): Karpova, L. N.; Kolotova, N. V.; Shurov, S. N.; Andreichikov, Yu. S.

CORPORATE SOURCE: inst. Org. Khim., Perm, Russia

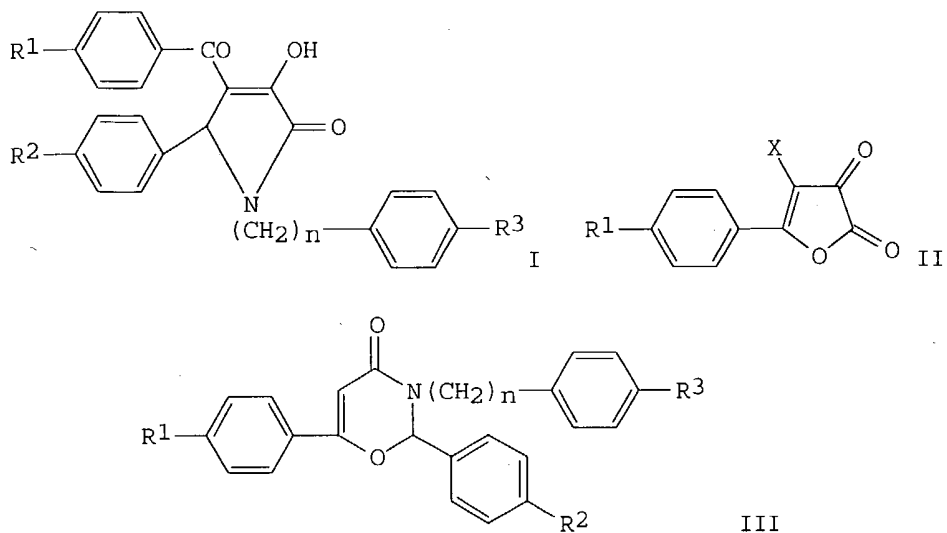
SOURCE: Zhurnal Organicheskoi Khimii (1992), 28(4), 779-85

CODEN: ZORKAE; ISSN: 0514-7492

DOCUMENT TYPE: Journal

LANGUAGE: Russian

GI



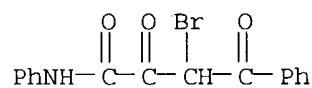
AB Dihydropyrrol-2-ones I ( $R_1 = \text{H, Me, Cl, MeO}$ ,  $R_2 = \text{Me}_2\text{NH, MeO, NO}_2, \text{H}$ ,  $R_3 = \text{H, MeO, Me}_2\text{NH}$ ,  $n = 1, 2$ ) were prepared in 29-68% yields by reaction of furandiones II with  $p\text{-R}_2\text{C}_6\text{H}_4\text{CH:N}(\text{CH}_2)_n\text{C}_6\text{H}_4\text{R}_3\text{-p}$ . Benzyldienamines, containing  $p\text{-MeO}$  and  $p\text{-NO}_2$  groups in the aldehyde fragment, gave oxazinones III.

IT **66286-56-4P 80366-13-8P 145488-69-3P**  
**145488-70-6P 145488-71-7P 145488-72-8P**  
**145488-73-9P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)

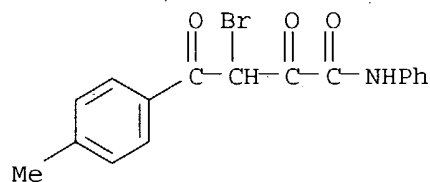
RN 66286-56-4 CAPLUS

CN Benzenebutanamide,  $\beta$ -bromo- $\alpha,\gamma$ -dioxo-N-phenyl- (9CI) (CA INDEX NAME)



RN 80366-13-8 CAPLUS

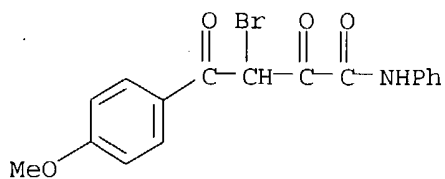
CN Benzenebutanamide,  $\beta$ -bromo-4-methyl- $\alpha,\gamma$ -dioxo-N-phenyl- (9CI) (CA INDEX NAME)



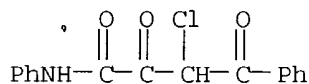
RN 145488-69-3 CAPLUS

CN Benzenebutanamide,  $\beta$ -bromo-4-methoxy- $\alpha,\gamma$ -dioxo-N-phenyl- (9CI) (CA INDEX NAME)

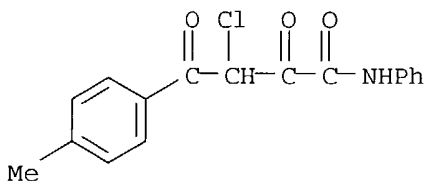
10/689,307



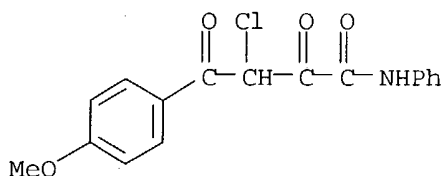
RN 145488-70-6 CAPLUS  
CN Benzenebutanamide,  $\beta$ -chloro- $\alpha,\gamma$ -dioxo-N-phenyl- (9CI)  
(CA INDEX NAME)



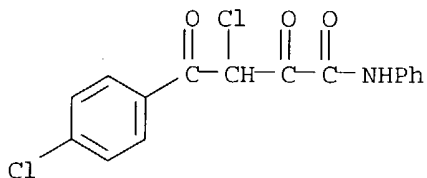
RN 145488-71-7 CAPLUS  
CN Benzenebutanamide,  $\beta$ -chloro-4-methyl- $\alpha,\gamma$ -dioxo-N-phenyl- (9CI)  
(CA INDEX NAME)



RN 145488-72-8 CAPLUS  
CN Benzenebutanamide,  $\beta$ -chloro-4-methoxy- $\alpha,\gamma$ -dioxo-N-phenyl- (9CI)  
(CA INDEX NAME)



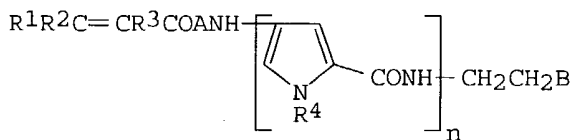
RN 145488-73-9 CAPLUS  
CN Benzenebutanamide,  $\beta$ ,4-dichloro- $\alpha,\gamma$ -dioxo-N-phenyl- (9CI)  
(CA INDEX NAME)



10/689,307

TITLE: Preparation of distamycin analogs as antineoplastic agents  
 INVENTOR(S): Mongelli, Nicola; Biasoli, Giovanni; Capolongo, Laura; Pezzoni, Gabriella  
 PATENT ASSIGNEE(S): Farmitalia Carlo Erba S.r.l., Italy  
 SOURCE: Eur. Pat. Appl., 14 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 388948	A1	19900926	EP 1990-105426	19900322
EP 388948	B1	19931215		
R: GR				
CA 2030519	AA	19900924	CA 1990-2030519	19900322
CA 2030519	C	20000711		
WO 9011277	A1	19901004	WO 1990-EP471	19900322
W: AU, CA, FI, HU, JP, KR, SU, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE				
AU 9052761	A1	19901022	AU 1990-52761	19900322
AU 635733	B2	19930401		
ZA 9002221	A	19901228	ZA 1990-2221	19900322
EP 416075	A1	19910313	EP 1990-904822	19900322
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE				
HU 54981	A2	19910429	HU 1990-2839	19900322
HU 213507	B	19970728		
JP 03504863	T2	19911024	JP 1990-504729	19900322
JP 2986208	B2	19991206		
AT 98634	E	19940115	AT 1990-105426	19900322
ES 2062143	T3	19941216	ES 1990-105426	19900322
RU 2094430	C1	19971027	RU 1990-4894226	19900322
US 5175182	A	19921229	US 1990-613490	19901105
FI 95463	B	19951031	FI 1990-5758	19901121
FI 95463	C	19960212		
PRIORITY APPLN. INFO.:			GB 1989-6709	A 19890323
			EP 1990-105426	A 19900322
			WO 1990-EP471	A 19900322
OTHER SOURCE(S):			MARPAT 114:101537	
GI				



AB The title compds. [I; A = bond, NHZCO; B = C(:NR<sup>5</sup>)NHR<sup>6</sup>, (CH<sub>2</sub>)<sub>m</sub>NR<sub>2</sub>; R = alkyl; R<sub>1</sub>, R<sub>2</sub> = H, halo, cyano, NO<sub>2</sub>, alkyl, 4-(MeO)C<sub>6</sub>H<sub>4</sub>CO; R<sub>3</sub> = H, halo, cyano, NO<sub>2</sub>; R<sub>4</sub> = H, alkyl; R<sub>5</sub>, R<sub>6</sub> = H, R<sub>5</sub>R<sub>6</sub> = (CH<sub>2</sub>)<sub>2-3</sub>, CH:CH; Z = 1,4-phenylenediyl, heterocyclylenediyl; m = 1-3; n = 1-5] were prepared. Thus, N-deformyldistamycin A dihydrochloride was stirred 4 h with H<sub>2</sub>C:BrCO<sub>2</sub>H in DMF containing DCC to give I [A = bond, B = C(:NH)NH<sub>2</sub>, R<sub>1</sub> = R<sub>2</sub> = H, R<sub>3</sub> = Br, R<sub>4</sub> = Me] (II; n = 3). II (n = 4) had IC<sub>50</sub> of 0.003 mg/mL against murine L1210 leukemia cells in vitro.

10/689,307

IT 132268-29-2P

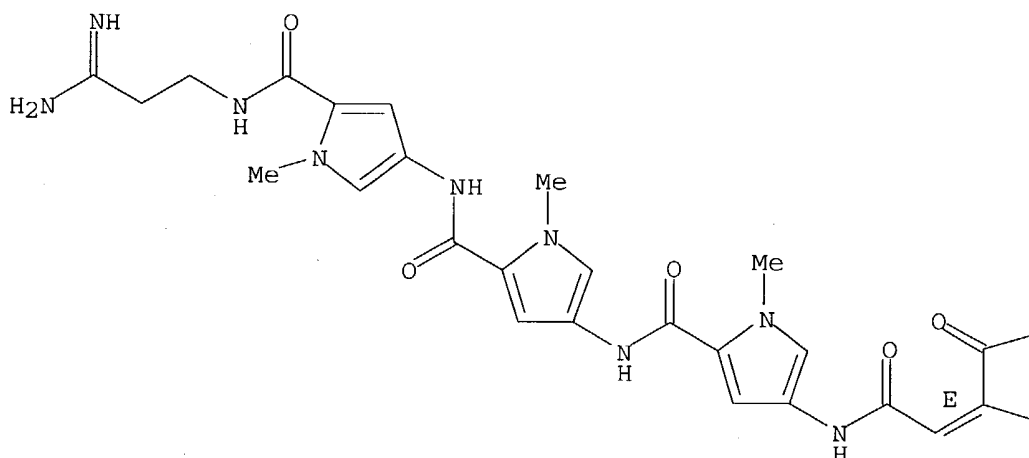
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of, as antineoplastic agent)

RN 132268-29-2 CAPLUS

CN 1H-Pyrrole-2-carboxamide, N-[5-[[[(3-amino-3-iminopropyl)amino]carbonyl]-1-methyl-1H-pyrrol-3-yl]-4-[[[4-[[3-bromo-4-(4-methoxyphenyl)-1,4-dioxo-2-butenyl]amino]-1-methyl-1H-pyrrol-2-yl]carbonyl]amino]-1-methyl-, monohydrochloride, (E)- (9CI) (CA INDEX NAME)

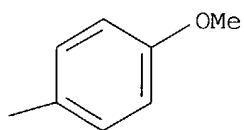
Double bond geometry as shown.

PAGE 1-A



● HCl

PAGE 1-B



Br

L4 ANSWER 7 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1984:407643 CAPLUS

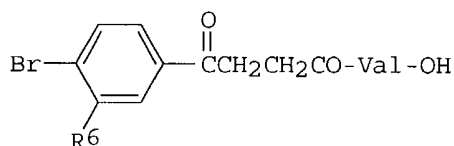
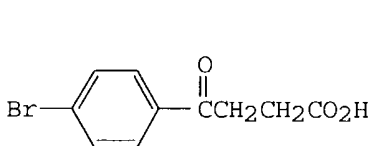
DOCUMENT NUMBER: 101:7643

TITLE: Substituted N-(ω-aroylepropionyl) derivatives of  
α-amino acids and esters

10/689,307

INVENTOR(S): McEvoy, Francis J.; Albright, Jay D.  
PATENT ASSIGNEE(S): American Cyanamid Co., USA  
SOURCE: U.S., 15 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

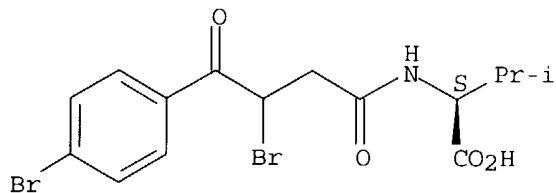
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4435329	A	19840306	US 1981-312119	19811016
PRIORITY APPLN. INFO.:			US 1981-312119	19811016
OTHER SOURCE(S):	CASREACT 101:7643			
GI				



AB Title compds. RCOZCONR1CHR2CO2R3 [R = (un)substituted naphthyl, 4-biphenyl, 4- or 5-indanyl, (un)substituted Ph; R1 = H, C1-4 alkyl; R2 = H, alkyl, hydroxyalkyl, mercaptoalkyl, cyclohexyl, cyclopentyl, Ph, phenylalkyl, carboxyalkyl, aminoalkyl, carbamoylalkyl; R3 = H, C1-4 alkyl; Z = CH(SR4)CHR5 or CHR5CH(SR4) (R4 = H, alkanoyl, Bz, phenylalkanoyl; R5 = H, C1-4 alkyl)] were prepared as antihypertensives (no data). Thus, propionate I was esterified with N-hydroxysuccinimide by DCC in dioxane to give the succinimido ester, which was condensed with valine in dioxane to give valine II (R6 = H). The latter was brominated with Br2 to give II (R6 = Br), which was treated with AcSK to give II (R6 = SAC).

IT **90471-90-2P**  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and reaction of, with potassium thioacetate)  
RN 90471-90-2 CAPLUS  
CN L-Valine, N-[3-bromo-4-(4-bromophenyl)-1,4-dioxobutyl]- (9CI) (CA INDEX NAME)

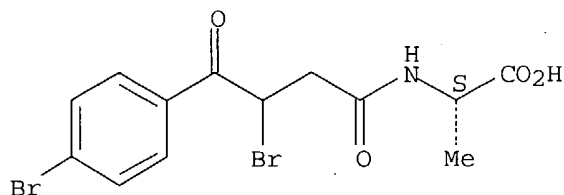
Absolute stereochemistry.



IT **90471-92-4P**  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and reaction of, with thioacetate)  
RN 90471-92-4 CAPLUS  
CN L-Alanine, N-[3-bromo-4-(4-bromophenyl)-1,4-dioxobutyl]- (9CI) (CA INDEX NAME)

10/689,307

Absolute stereochemistry.



L4 ANSWER 8 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1984:406955 CAPLUS  
DOCUMENT NUMBER: 101:6955  
TITLE: Chemistry of oxalyl derivatives of methyl ketones.  
XXXIV. Reaction of 5-aryl-2,3-dihydrofuran-2,3-diones  
with disubstituted diazoalkanes  
AUTHOR(S): Andreichikov, Yu. S.; Gel't, N. V.  
CORPORATE SOURCE: Farm. Inst., Perm, USSR  
SOURCE: Zhurnal Organicheskoi Khimii (1984), 20(2), 411-16  
CODEN: ZORKAE; ISSN: 0514-7492  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian  
OTHER SOURCE(S): CASREACT 101:6955  
GI

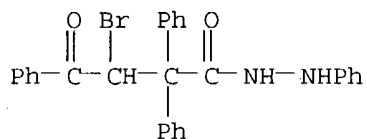
\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Thermolysis of 5-aryl-2,3-dihydro-2,3-furandiones (I) (R, R1 = H, H; Cl, H; Me, H; Br, H; H, Br; Me, Br; Br, Br) gave ketenes, which with Ph<sub>2</sub>C:N<sub>2</sub> or 9-diazofluorene gave, putatively, cyclopropanones, recyclization of which gave 3,3,5-trisubstituted-2-furanones (II or III). I themselves with the same diazo compds. gave either 3,3,6-trisubstituted-2,4-pyranones IV or V and 6,6,6 $\alpha$ -trisubstituted-2,3-dioxo-2,3,6,6 $\alpha$ -tetrahydro-5H-furo[2,3-c]pyrazoles VI.

IT **90448-32-1P**  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 90448-32-1 CAPLUS

CN Benzenebutanoic acid,  $\beta$ -bromo- $\gamma$ -oxo- $\alpha,\alpha$ -diphenyl-,  
2-phenylhydrazide (9CI) (CA INDEX NAME)



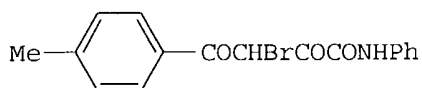
L4 ANSWER 9 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1982:46260 CAPLUS  
DOCUMENT NUMBER: 96:46260  
TITLE:  $\beta$ -Bromo-p-toluylypyrrolic acid anilide with  
antimicrobial activity  
INVENTOR(S): Andreichikov, Yu. S.; Plakhina, G. D.; Plaksina, A. N.  
PATENT ASSIGNEE(S): Perm Pharmaceutical Institute, USSR



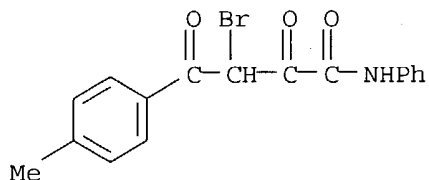
10/689,307

SOURCE: U.S.S.R. From: Otkrytiya, Izobret., Prom. Obraztsy,  
Tovarnye Znaki 1981, (33), 310.  
CODEN: URXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Russian  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 750971	A1	19810907	SU 1978-2640880	19780707
PRIORITY APPLN. INFO.:			SU 1978-2640880	A 19780707
OTHER SOURCE(S):	CASREACT	96:46260		
GI				



AB The title compound I [80366-13-8] has antimicrobial activity.  
IT **80366-13-8**  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study) (bactericide)  
RN 80366-13-8 CAPLUS  
CN Benzenebutanamide,  $\beta$ -bromo-4-methyl- $\alpha,\gamma$ -dioxo-N-phenyl- (9CI) (CA INDEX NAME)

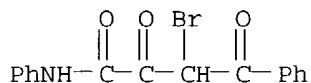


L4 ANSWER 10 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1982:28650 CAPLUS  
DOCUMENT NUMBER: 96:28650  
TITLE:  $\beta$ -Bromobenzoylpyrrolacemic acid phenylamide with antiinflammatory activity  
INVENTOR(S): Andreichikov, Yu. S.; Plakhina, G. D.; Pidemskii, E. L.; Sakharnaya, T. Ya.; Golyasnaya, N. V.  
PATENT ASSIGNEE(S): Perm State University, USSR; Perm Pharmaceutical Institute  
SOURCE: U.S.S.R. From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1981, (33), 310.  
CODEN: URXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Russian  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

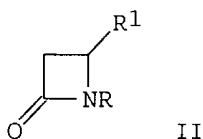
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 623356	A1	19810907	SU 1977-2458613	19770302
PRIORITY APPLN. INFO.:			SU 1977-2458613	A 19770302

10/689,307

OTHER SOURCE(S): CASREACT 96:28650  
AB The title compound PhCOCHBrCOCONHPh [66286-56-4] has  
antiinflammatory activity.  
IT **66286-56-4**  
RL: BIOL (Biological study)  
(inflammation inhibitor)  
RN 66286-56-4 CAPLUS  
CN Benzenebutanamide,  $\beta$ -bromo- $\alpha,\gamma$ -dioxo-N-phenyl- (9CI) (CA  
INDEX NAME)

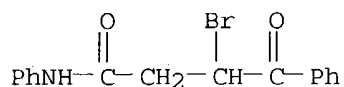


L4 ANSWER 11 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1981:550286 CAPLUS  
DOCUMENT NUMBER: 95:150286  
TITLE: A convenient synthesis of monocyclic  $\beta$ -lactams by  
means of solid-liquid phase transfer reactions  
AUTHOR(S): Takahata, Hiroki; Ohnishi, Yoshinori; Takehara,  
Hiroyuki; Tsuritani, Kazuko; Yamazaki, Takao  
CORPORATE SOURCE: Fac. Pharm. Sci., Toyama Med. Pharm. Univ., Toyama,  
930-01, Japan  
SOURCE: Chemical & Pharmaceutical Bulletin (1981), 29(4),  
1063-8  
CODEN: CPBTAL; ISSN: 0009-2363  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 95:150286  
GI



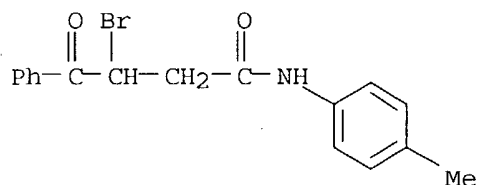
AB The intramol. N-alkylation of  $R^1CHBrCH_2CONHR$  [I, R = (substituted) Ph, PhCH<sub>2</sub>, p-MeOC<sub>6</sub>H<sub>4</sub>CH<sub>2</sub>,  $\beta$ -phenethyl, cyclohexyl, Pr,  $\alpha$ -naphthyl, CH<sub>2</sub>CO<sub>2</sub>Et, CHMeCO<sub>2</sub>Me, CH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>Me, CH(CHMe<sub>2</sub>)CO<sub>2</sub>Me, CHPhCO<sub>2</sub>Me, CHMeCO<sub>2</sub>Me; R<sub>1</sub> = H] under phase transfer conditions gave the corresponding azetidinones II (R<sub>1</sub> = H) in 63-94% yields. Similarly, I (R = Ph, p-MeOC<sub>6</sub>H<sub>4</sub>, p-MeC<sub>6</sub>H<sub>4</sub>, p-ClC<sub>6</sub>H<sub>4</sub>; R<sub>1</sub> = CPh) gave the corresponding II (R<sub>1</sub> = CPh) in 52-61% yields.  
IT **74457-62-8P 74457-63-9P 74457-64-0P 79353-64-3P**  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and intramol. alkylation of)  
RN 74457-62-8 CAPLUS  
CN Benzenebutanamide,  $\beta$ -bromo- $\gamma$ -oxo-N-phenyl- (9CI) (CA INDEX NAME)

10/689,307



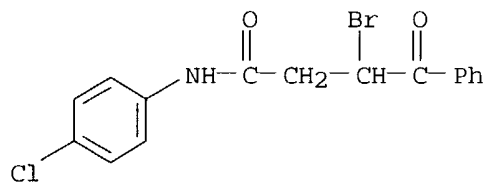
RN 74457-63-9 CAPLUS

CN Benzenebutanamide,  $\beta$ -bromo-N-(4-methylphenyl)- $\gamma$ -oxo- (9CI) (CA INDEX NAME)



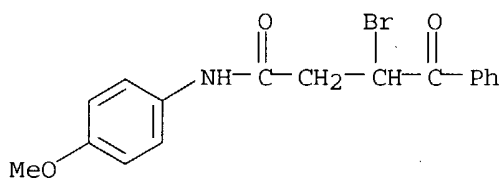
RN 74457-64-0 CAPLUS

CN Benzenebutanamide,  $\beta$ -bromo-N-(4-chlorophenyl)- $\gamma$ -oxo- (9CI) (CA INDEX NAME)



RN 79353-64-3 CAPLUS

CN Benzenebutanamide,  $\beta$ -bromo-N-(4-methoxyphenyl)- $\gamma$ -oxo- (9CI) (CA INDEX NAME)



L4 ANSWER 12 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1980:471410 CAPLUS

DOCUMENT NUMBER: 93:71410

TITLE: An alternative route to 4-benzoyl-2-azetidinones

AUTHOR(S): Abdulla, Riaz F.; Williams, J. C., Jr.

CORPORATE SOURCE: Lilly Res. Lab., Div. Eli Lilly and Co., Greenfield, IN, 46140, USA

SOURCE: Tetrahedron Letters (1980), 21(11), 997-1000

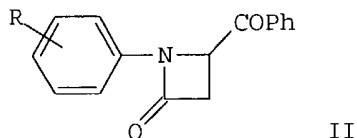
CODEN: TELEAY; ISSN: 0040-4039

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 93:71410

GI



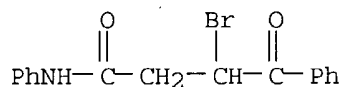
AB RC<sub>6</sub>H<sub>4</sub>NHCOCH<sub>2</sub>CH(COPh)Br (I; R = H, 4-Me, 4-Cl, 3-CF<sub>3</sub>) were prepared (80-95%) from PhCOCHBrCH<sub>2</sub>CO<sub>2</sub>H and RC<sub>6</sub>H<sub>4</sub>NH<sub>2</sub> by DCC condensation in CH<sub>2</sub>Cl<sub>2</sub>. I were treated with various bases to give azetidinones (II). Thus, I (R = H) was treated in EtOH for 5-10 min at 22° with Amberlite IRA-400 to give 60% II (R = H).

IT **74457-62-8P 74457-63-9P 74457-64-0P**  
**74457-65-1P**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and cyclodehydrobromination of)

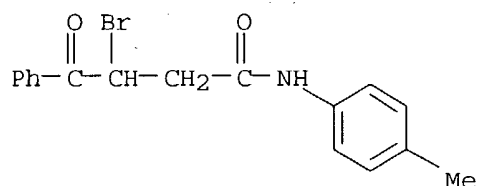
RN 74457-62-8 CAPLUS

CN Benzenebutanamide, β-bromo-γ-oxo-N-phenyl- (9CI) (CA INDEX NAME)



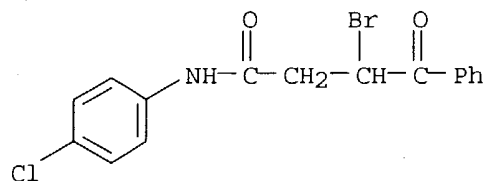
RN 74457-63-9 CAPLUS

CN Benzenebutanamide, β-bromo-N-(4-methylphenyl)-γ-oxo- (9CI) (CA INDEX NAME)



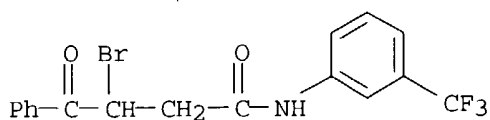
RN 74457-64-0 CAPLUS

CN Benzenebutanamide, β-bromo-N-(4-chlorophenyl)-γ-oxo- (9CI) (CA INDEX NAME)

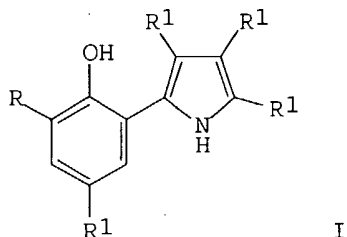


RN 74457-65-1 CAPLUS

CN Benzenebutanamide, β-bromo-γ-oxo-N-[3-(trifluoromethyl)phenyl]- (9CI) (CA INDEX NAME)



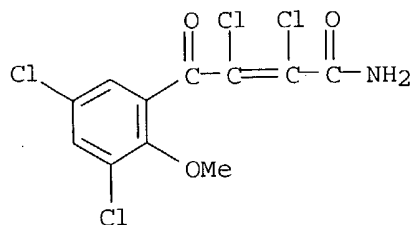
L4 ANSWER 13 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1979:137608 CAPLUS  
 DOCUMENT NUMBER: 90:137608  
 TITLE: Synthesis of some 2-phenylpyrrole derivatives  
 AUTHOR(S): ApSimon, John W.; Durham, David G.; Rees, Alun H.  
 CORPORATE SOURCE: Dep. Chem., Carleton Univ., Ottawa, ON, Can.  
 SOURCE: Journal of the Chemical Society, Perkin Transactions  
 1: Organic and Bio-Organic Chemistry (1972-1999)  
 (1978), (12), 1588-94  
 CODEN: JCPRB4; ISSN: 0300-922X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 90:137608  
 GI



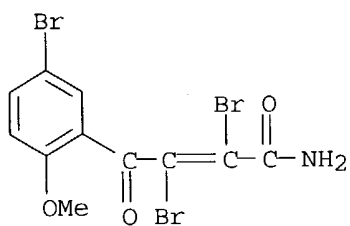
AB Ph cyclopropyl ketones (prepared either by reaction of the appropriate benzene derivative with  $\text{Cl}(\text{CH}_2)_3\text{COCl}$  and subsequent cyclization or by direct reaction with cyclopropylcarbonyl chloride) underwent reaction with  $\text{HCONH}_2$  to give the corresponding 2-phenylpyrrolidines. Aromatization of the pyrrolidines, via the resp. 1-pyrrolines, gave 2-phenylpyrroles. An improved synthesis of 2-phenylpyrroles from N-benzoylglycines involving cyclization using dicyclohexylcarbodiimide followed by reaction of the resulting oxazolones with acetylenedicarboxylate esters is described. The chloro analogs I ( $\text{R} = \text{H}, \text{Cl}$ ;  $\text{R}_1 = \text{Cl}$ ) of the bromine containing marine antibiotic I ( $\text{R} = \text{R}_1 = \text{Br}$ ) were prepared in addition to several title compds.

IT **69640-35-3P 69640-37-5P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 69640-35-3 CAPLUS  
 CN 2-Butenamide, 2,3-dichloro-4-(3,5-dichloro-2-methoxyphenyl)-4-oxo- (9CI)  
 (CA INDEX NAME)

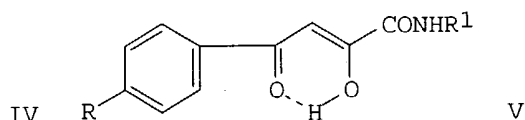
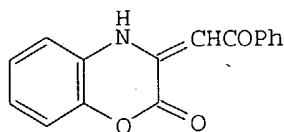
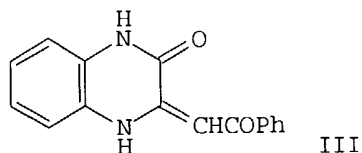
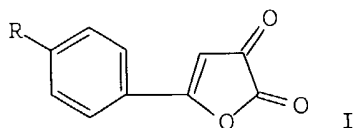
10/689,307



RN 69640-37-5 CAPLUS  
CN 2-Butenamide, 2,3-dibromo-4-(5-bromo-2-methoxyphenyl)-4-oxo- (9CI) (CA  
INDEX NAME)



L4 ANSWER 14 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1978:152193 CAPLUS  
DOCUMENT NUMBER: 88:152193  
TITLE: Chemistry of oxalyl derivatives of methyl ketones.  
IX. Reaction of 5-aryl-2,3-dihydrofuran-2,3-diones  
with ammonia and aromatic amines  
AUTHOR(S): Andreichikov, Yu. S.; Nalimova, Yu. A.; Tendryakova,  
S. P.; Vilenchik, Ya. M.  
CORPORATE SOURCE: Perm. Farm. Inst., Perm, USSR  
SOURCE: Zhurnal Organicheskoi Khimii (1978), 14(1), 160-3  
CODEN: ZORKAE; ISSN: 0514-7492  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian  
OTHER SOURCE(S): CASREACT 88:152193  
GI



AB Aryldihydrofurandiones I (R = H, Me, MeO, Br) underwent ring cleavage with R<sub>1</sub>NH<sub>2</sub> (R<sub>1</sub> = H, Ph, p-tolyl, p-anisyl, p-BrC<sub>6</sub>H<sub>4</sub>) in C<sub>6</sub>H<sub>6</sub> at room temperature to give 13 p-RC<sub>6</sub>H<sub>4</sub>COCH<sub>2</sub>COCONHR<sub>1</sub> (II) in 88-99% yield. II (R = R<sub>1</sub> = H) cyclized with o-XC<sub>6</sub>H<sub>4</sub>NH<sub>2</sub> (X = HO, H<sub>2</sub>N) to give tetrahydroquinoxalinone III

10/689,307

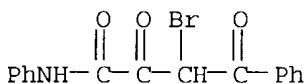
and 95% benzoxazinone IV, resp. II exist entirely as the intramol. H-bonded tautomers V, according to their NMR spectra.

IT **66286-56-4P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 66286-56-4 CAPLUS

CN Benzenebutanamide,  $\beta$ -bromo- $\alpha,\gamma$ -dioxo-N-phenyl- (9CI) (CA INDEX NAME)



L4 ANSWER 15 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1977:139573 CAPLUS

DOCUMENT NUMBER: 86:139573

TITLE: Substances with antineoplasm activity. LVIII. Some amides of  $\beta$ -4-pentoxycarbonyl- $\beta$ -bromoacrylic acid

AUTHOR(S): Zikan, V.; Kakac, B.; Holubek, J.; Vesela, H.; Semonsky, M.

CORPORATE SOURCE: Res. Inst. Pharm. Biochem., Prague, Czech.

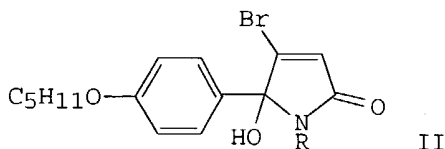
SOURCE: Collection of Czechoslovak Chemical Communications (1976), 41(10), 3113-18

CODEN: CCCCAK; ISSN: 0010-0765

DOCUMENT TYPE: Journal

LANGUAGE: English

GI



AB Reaction of  $\gamma$ -(4-pentoxyphenyl)- $\gamma$ -acetoxy- $\beta$ -bromo- $\Delta\alpha,\beta$ -crotonolactone with RNH<sub>2</sub> gave either p-C<sub>5</sub>H<sub>11</sub>OC<sub>6</sub>H<sub>4</sub>COCBr:CHCONHR-cis (I; R = 1-carbethoxycyclopentyl, 1-carbethoxycyclohexyl) or II (R = H, Me, Et, Pr, Bu, CH<sub>2</sub>CH<sub>2</sub>OH, CH<sub>2</sub>CO<sub>2</sub>Et, CH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>Et). Mixts. of I and II were obtained when R was L-CH(CO<sub>2</sub>Et)CH<sub>2</sub>CO<sub>2</sub>Et or L-CH(CO<sub>2</sub>Et)CH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>Et. Most of the above amides either inhibited the growth of transplantable tumors in exptl. animals or prolonged the survival of the animals.

IT **62105-77-5P 62105-79-7P 62105-80-0P**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation and neoplasm-inhibiting activity of)

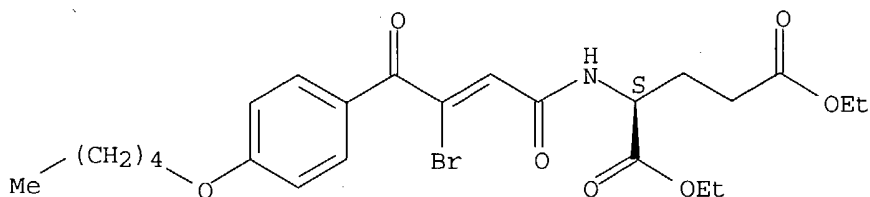
RN 62105-77-5 CAPLUS

CN L-Glutamic acid, N-[3-bromo-1,4-dioxo-4-[4-(pentylloxy)phenyl]-2-butenyl]-, diethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

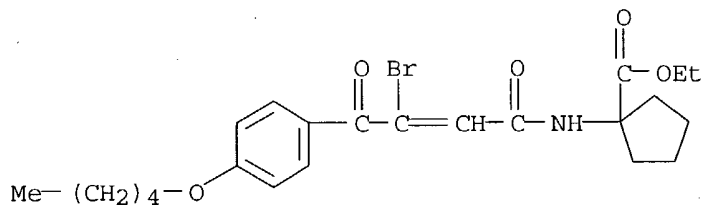
Double bond geometry unknown.

10/689,307



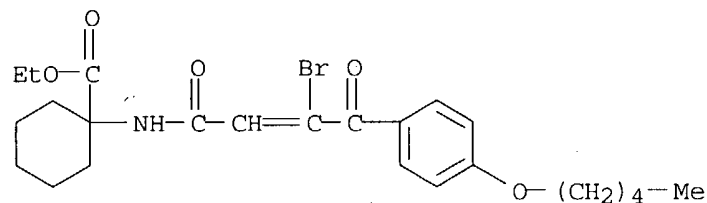
RN 62105-79-7 CAPLUS

CN Cyclopentanecarboxylic acid, 1-[[3-bromo-1,4-dioxo-4-[4-(pentyloxy)phenyl]-2-butenyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



RN 62105-80-0 CAPLUS

CN Cyclohexanecarboxylic acid, 1-[[3-bromo-1,4-dioxo-4-[4-(pentyloxy)phenyl]-2-butenyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



IT 62105-75-3P

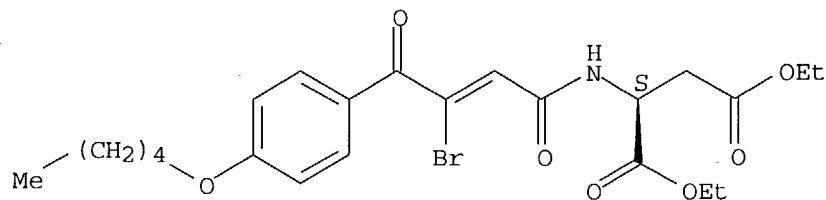
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 62105-75-3 CAPLUS

CN L-Aspartic acid, N-[3-bromo-1,4-dioxo-4-[4-(pentyloxy)phenyl]-2-butenyl]-, diethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.



L4 ANSWER 16 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1973:159241 CAPLUS

DOCUMENT NUMBER: 78:159241

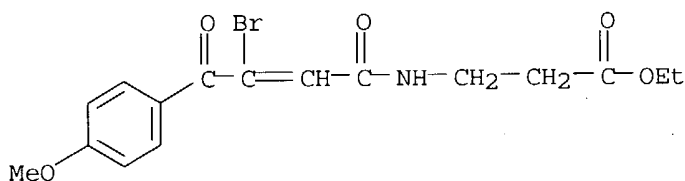
TITLE: Substituted amides of  $\beta$ -4-alkoxybenzoyl- $\beta$ -



10/689,307

INVENTOR(S): bromoacrylic acids  
Semonsky, Miroslav; Kucharczyk, Norbert; Zikan,  
Viktor; Jelinek, Vaclav  
SOURCE: Czech., 3 pp.  
CODEN: CZXXA9  
DOCUMENT TYPE: Patent  
LANGUAGE: Czech  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	CS 145820		19721015	CS 1968-6396	19680912
GI	For diagram(s), see printed CA Issue.				
AB	The title compds. (I, R1 = Me, Bu; R2, R3 = H, alkyl, alicyclic ring), which show antineoplastic activity, are prepared by reaction of $\gamma$ -(4-alkoxyphenyl)- $\gamma$ -acyloxy- $\beta$ -bromo- $\Delta\alpha,\beta$ -crotonolactone with the appropriate amino acid derivative E.g., $\gamma$ -(4-butoxyphenyl)- $\gamma$ -acetoxy- $\beta$ -bromo- $\Delta\alpha,\beta$ -crotonolactone was kept with Et 1-aminocyclohexanecarboxylate in C6H6 48 hr to give 95% Et N-[ $\beta$ -(4-butoxybenzoyl) - $\beta$ - bromoacryloyl] - 1 - aminocyclohexanecarboxylate. Similarly prepared were 16 addnl. I.				
IT	<b>24016-24-8</b> RL: RCT (Reactant); RACT (Reactant or reagent) (hydrolysis of)				
RN	24016-24-8 CAPLUS				
CN	$\beta$ -Alanine, N-[3-bromo-4-(4-methoxyphenyl)-1,4-dioxo-2-butenyl]-, ethyl ester (9CI) (CA INDEX NAME)				

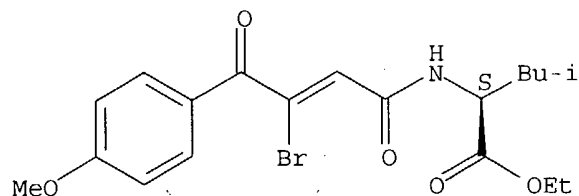


IT 24016-22-6P 24016-25-9P 24016-26-0P  
24576-05-4P 24576-06-5P 24576-07-6P  
24576-10-1P 24576-11-2P 24576-12-3P  
24576-13-4P 24628-86-2P 24628-88-4P  
24639-55-2P 24639-56-3P 29482-41-5P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 24016-22-6 CAPLUS

CN L-Leucine, N-[3-bromo-4-(4-methoxyphenyl)-1,4-dioxo-2-butenyl]-, ethyl ester (9CI) (CA INDEX NAME)

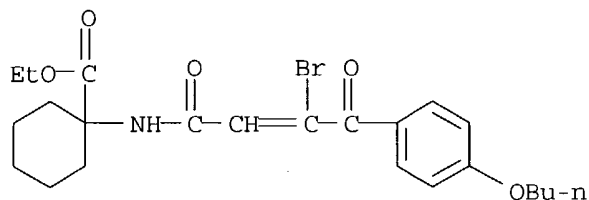
Absolute stereochemistry.  
Double bond geometry unknown.



10/689,307

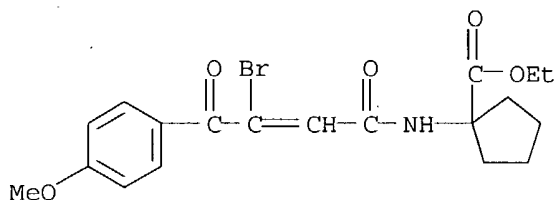
RN 24016-25-9 CAPLUS

CN Cyclohexanecarboxylic acid, 1-[[3-bromo-4-(4-butoxyphenyl)-1,4-dioxo-2-butenyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



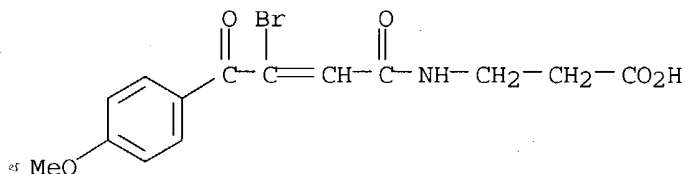
RN 24016-26-0 CAPLUS

CN Cyclopentanecarboxylic acid, 1-[[3-bromo-4-(4-methoxyphenyl)-1,4-dioxo-2-butenyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



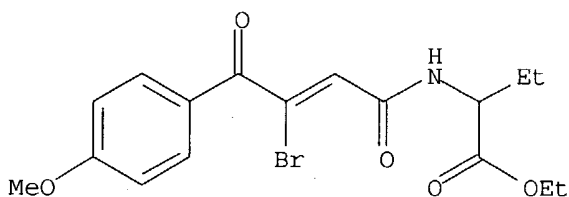
RN 24576-05-4 CAPLUS

CN  $\beta$ -Alanine, N-[3-bromo-4-(4-methoxyphenyl)-1,4-dioxo-2-butenyl]- (9CI) (CA INDEX NAME)



RN 24576-06-5 CAPLUS

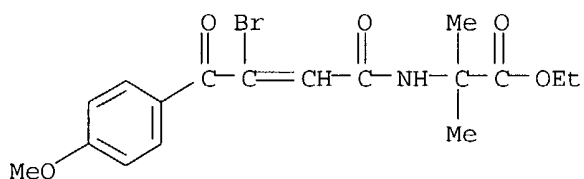
CN Butanoic acid, 2-[[3-bromo-4-(4-methoxyphenyl)-1,4-dioxo-2-butenyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



RN 24576-07-6 CAPLUS

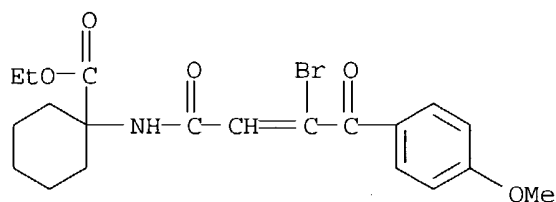
CN Alanine, N-[3-bromo-4-(4-methoxyphenyl)-1,4-dioxo-2-butenyl]-2-methyl-, ethyl ester (9CI) (CA INDEX NAME)

10/689,307



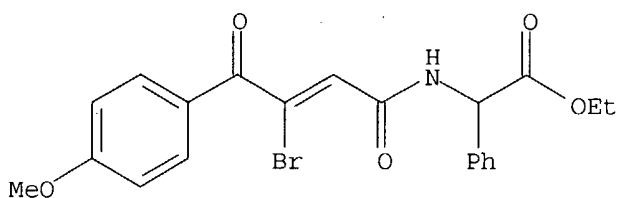
RN 24576-10-1 CAPLUS

CN Cyclohexanecarboxylic acid, 1-[[3-bromo-4-(4-methoxyphenyl)-1,4-dioxo-2-butenyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



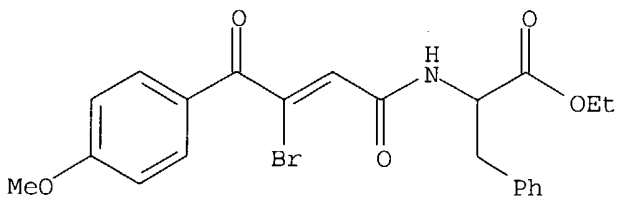
RN 24576-11-2 CAPLUS

CN Benzeneacetic acid,  $\alpha$ -[[3-bromo-4-(4-methoxyphenyl)-1,4-dioxo-2-butenyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



RN 24576-12-3 CAPLUS

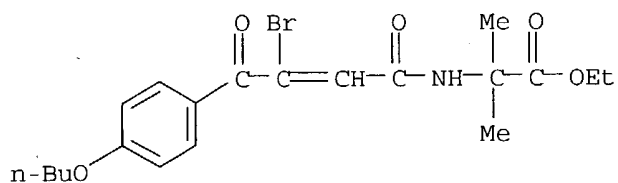
CN Phenylalanine, N-[3-bromo-4-(4-methoxyphenyl)-1,4-dioxo-2-butenyl]-, ethyl ester (9CI) (CA INDEX NAME)



RN 24576-13-4 CAPLUS

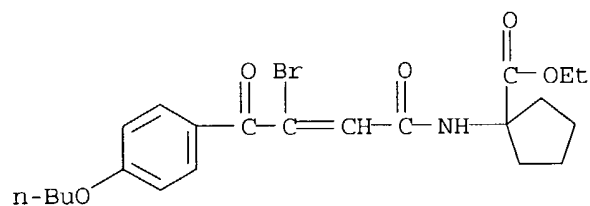
CN Alanine, N-[3-bromo-4-(4-butoxyphenyl)-1,4-dioxo-2-butenyl]-2-methyl-, ethyl ester (9CI) (CA INDEX NAME)

10/689,307



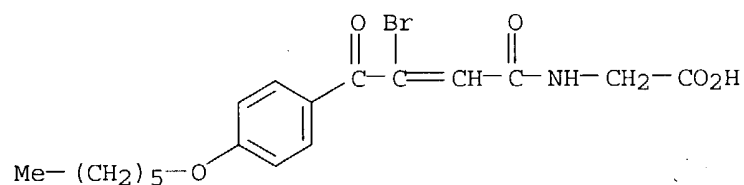
RN 24628-86-2 CAPLUS

CN Cyclopentanecarboxylic acid, 1-[[3-bromo-4-(4-butoxyphenyl)-1,4-dioxo-2-butenyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



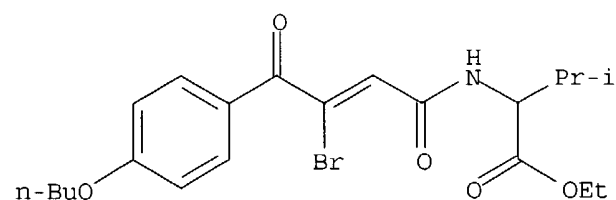
RN 24628-88-4 CAPLUS

CN Glycine, N-[3-bromo-4-[4-(hexyloxy)phenyl]-1,4-dioxo-2-butenyl]- (9CI) (CA INDEX NAME)



RN 24639-55-2 CAPLUS

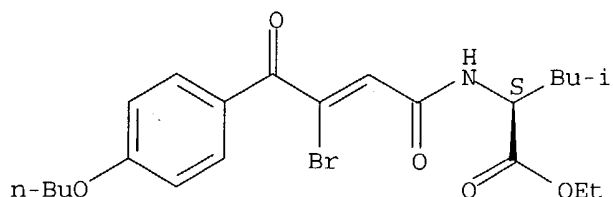
CN Valine, N-[3-bromo-4-(4-butoxyphenyl)-1,4-dioxo-2-butenyl]-, ethyl ester (9CI) (CA INDEX NAME)



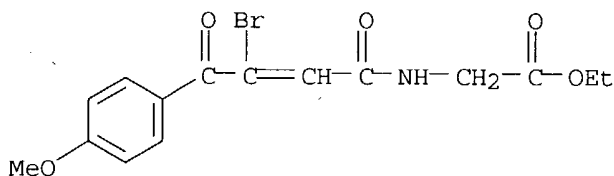
RN 24639-56-3 CAPLUS

CN L-Leucine, N-[3-bromo-4-(4-butoxyphenyl)-1,4-dioxo-2-butenyl]-, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
Double bond geometry unknown.



RN 29482-41-5 CAPLUS  
 CN Glycine, N-[3-bromo-4-(4-methoxyphenyl)-1,4-dioxo-2-butenyl]-, ethyl ester  
 (9CI) (CA INDEX NAME)



L4 ANSWER 17 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1972:461617 CAPLUS  
 DOCUMENT NUMBER: 77:61617  
 TITLE:  $\beta$ -Chloro- $\beta$ -benzoylacrylic acid derivatives  
 INVENTOR(S): Zanker, Fritz; Reicheneder, Franz  
 PATENT ASSIGNEE(S): Badische Anilin- & Soda-Fabrik AG  
 SOURCE: Ger. Offen., 14 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2055619	A	19720518	DE 1970-2055619	19701112

PRIORITY APPLN. INFO.: DE 1970-2055619 19701112

GI For diagram(s), see printed CA Issue.

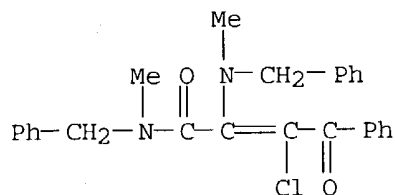
AB Ten title compds. PhCOCCl:CRCOR1 [I, R,R1 = 1-pyrrolidinyl, 2,6-dimethylmorpholino, morpholino, MePhN, Me(PhCH2)N, piperidino, Et2N, PhS, p-MeOC6H4S, or p-ClC6H4S; or RR1 = o-(MeN)2-C6H4], which were used as hardeners in photog. gelatin solns. and are useful, e.g., in the preparation of dyes and pesticides and as leather tanning agents, were prepared by reaction of phenylmucochloryl chloride (II) with the appropriate amines or thiols or successive reaction of II with an amine and thiol in the presence (in the case of the thiols) of Et3N in inert solvents. Thus, reaction of II with pyrrolidine in C6H6 for 12 hr gave 81% I (R = R1 = 1-pyrrolidinyl). Reaction of II with excess PhNHMe in C6H6 for 48 hr gave 90% N-methylphenylmucochloranilide (III). Reaction of III with PhSH in dioxane containing Et3N 12 hr at room temperature and 1 hr at reflux temperature gave 85% I (R = PhS, R1 = MePhN).

IT **38596-16-6P 38596-19-9P 38596-20-2P 38596-21-3P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)

RN 38596-16-6 CAPLUS  
 CN 2-Butenamide, 3-chloro-N-methyl-2-[methyl(phenylmethyl)amino]-4-oxo-4-

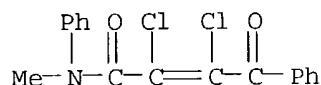
10/689,307

phenyl-N-(phenylmethyl)- (9CI) (CA INDEX NAME)



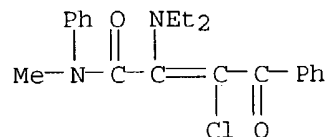
RN 38596-19-9 CAPLUS

CN 2-Butenamide, 2,3-dichloro-N-methyl-4-oxo-N,4-diphenyl- (9CI) (CA INDEX NAME)



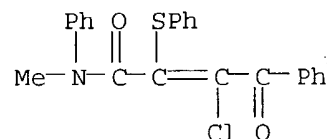
RN 38596-20-2 CAPLUS

CN 2-Butenamide, 3-chloro-2-(diethylamino)-N-methyl-4-oxo-N,4-diphenyl- (9CI) (CA INDEX NAME)



RN 38596-21-3 CAPLUS

CN 2-Butenamide, 3-chloro-N-methyl-4-oxo-N,4-diphenyl-2-(phenylthio)- (9CI) (CA INDEX NAME)



L4 ANSWER 18 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1970:415245 CAPLUS

DOCUMENT NUMBER: 73:15245

TITLE: Substances with antineoplastic activity. XLIII.  
Reaction of ethyl ester of N-[β-(4-methoxybenzoyl)-β-bromoacryloyl]glycine and  
-β-alanine with hydrazide; ethyl ester of  
N-[β-(4-methoxybenzoyl)-β-bromoacryloyl]glycylglycine

AUTHOR(S): Zikan, Viktor; Semonsky, Miroslav; Svatek, Emil

CORPORATE SOURCE: Vyzk. Ustav Farm. Biochem., Prague, Czech.

SOURCE: Collection of Czechoslovak Chemical Communications  
(1970), 35(5), 1434-9

CODEN: CCCCCK; ISSN: 0010-0765

DOCUMENT TYPE: Journal

10/689,307

LANGUAGE: English

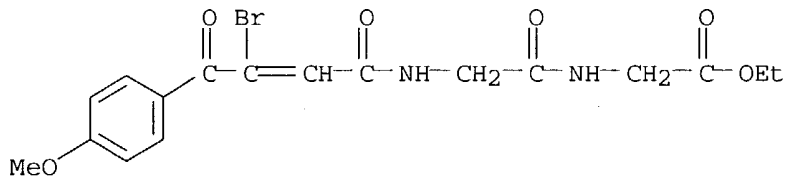
AB p-MeOC<sub>6</sub>H<sub>4</sub>COCBr:CHCONH(CH<sub>2</sub>)<sub>n</sub>CO<sub>2</sub>Et (n = 1 and 2) gave pyrazoles with excess N<sub>2</sub>H<sub>4</sub>.H<sub>2</sub>O in EtOH. p-MeOC<sub>6</sub>H<sub>4</sub>COCBr:CHCONHCH<sub>2</sub>CO<sub>2</sub>H gave with H<sub>2</sub>NCH<sub>2</sub>CO<sub>2</sub>Et by the dicyclohexylcarbodiimide method p-MeOC<sub>6</sub>H<sub>4</sub>COCBr:CHCONHCH<sub>2</sub>CONHCH<sub>2</sub>CO<sub>2</sub>Et (I), which exists predominantly in the hydroxylactam form. One of the pyrazoles and I inhibited the growth of the mammary adenocarcinoma, Ehrlich ascites tumor, and Crocker's sarcoma 180 by 33-47% in rats but did not prolong survival of the animals. I prolonged the survival of mice with the S 37 sarcoma by 24% but had no effect on the tumor growth. None of the compds. had any effect on the Yoshida ascites sarcoma.

IT 24850-96-2P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 24850-96-2 CAPLUS

CN Glycine, N-[N-(3-p-anisoyl-3-bromoacryloyl)glycyl]-, ethyl ester (8CI)  
(CA INDEX NAME)

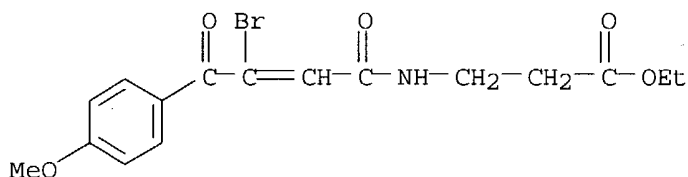


IT 24016-24-8 29482-41-5

RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with hydrazine)

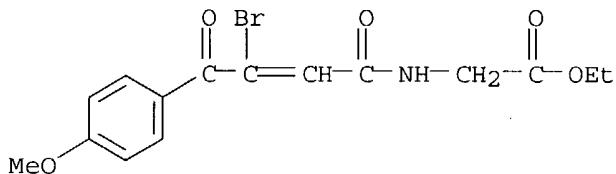
RN 24016-24-8 CAPLUS

CN β-Alanine, N-[3-bromo-4-(4-methoxyphenyl)-1,4-dioxo-2-butenyl]-, ethyl ester (9CI) (CA INDEX NAME)



RN 29482-41-5 CAPLUS

CN Glycine, N-[3-bromo-4-(4-methoxyphenyl)-1,4-dioxo-2-butenyl]-, ethyl ester (9CI) (CA INDEX NAME)



L4 ANSWER 19 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1970:3184 CAPLUS

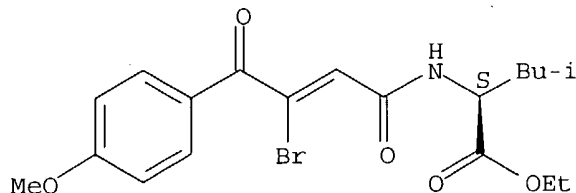
DOCUMENT NUMBER: 72:3184

TITLE: Substances with antineoplastic activity. XXXV. Ethyl esters of N-(β-4-alkoxybenzoyl-β-bromoacryloyl)amino acids

10/689,307

AUTHOR(S): Kucharczyk, Norbert; Zikan, Viktor; Semonsky, M.;  
Jelinek, V.  
CORPORATE SOURCE: Vyzk. Ustav Farm. Biochem., Prague, Czech.  
SOURCE: Collection of Czechoslovak Chemical Communications  
(1969), 34(11), 3637-42  
CODEN: CCCCCK; ISSN: 0010-0765  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB The following title compds. p-R1OC6H4COCBr:CHCONHR2 were obtained when 4.5 millimoles  $\gamma$ -4-methoxy- or  $\gamma$ -(4-butoxyphenyl)- $\gamma$ -acetoxy- $\beta$ -bromo- $\Delta\alpha.\beta$ -crotonolactone (S, K., Z., and J., 1969) and 10 millimoles of the corresponding amino acid in 25 ml C6H6 was kept 48 hr and overnight at 10° and the precipitate crystallized (R1, R2, % yield, and m.p. given): Me, (CH2)2CO2Et (I), 94, 137-9° (MeOH); Me, (CH2)2CO2H (I I), 93, 161-2° (aqueous MeOH); Me, CH2CO2Et, 59, 124-6° (C6H6-petroleum ether); Me, CMe2CO2Et, 80, 150-1.5° (C6H6); Me, CH(iso-Bu)CO2Et, 72, 128-30° (cyclohexane); Me, 1-cyclopentyl-1-ethoxycarbonyl, 89, 160-1° (C6H6); Me, 1-cyclohexyl-1-ethoxycarbonyl, 95, 180-2° (C6H6); Me, CHPhCO2Et, 87, 172-3° (MeOH); Me, CH(CH2Ph)CO2Et, 69, 93-6° (MeOH); Bu, CMe2CO2Et, 56, 133-4.5°, C6H6; Bu, CH(iso-Pr)CO2Et, 61, 127-9° (MeOH); Bu, CH(iso-Bu)CO2Et, 65, 93-6° (MeOH); Bu, 1-cyclopentyl-1-ethoxycarbonyl, 73, 141-3° (C6H6); Bu, 1-cyclohexyl-1-ethoxycarbonyl, 83, 163-4° (C6H6); C6H13, CH2CO2H (III), 68, 141-3° (C6H6).  $\gamma$ -4-Hexyloxyphenyl- $\gamma$ -acetoxy -  $\beta$  - bromo -  $\Delta\alpha.\alpha$  - crotonolactone, used in the synthesis of III, was obtained in a 85% yield from  $\gamma$ -hexyloxyphenyl- $\alpha,\beta$ -dibromo- $\Delta\alpha.\beta$ -crotonolactone, anhydrous AcONa, and AcOH and purified on a silica gel column in 1:9 C6H6-cyclohexane and HCONMe2-H3PO4 as crystals, m. 47-8° (MeOH). II was obtained by hydrolysis of I in alc. KOH 48 hr. All compds. inhibited the growth of exptl. tumors and prolonged the survival of rats with the Yoshida tumor.  
IT 24016-22-6 24016-24-8 24016-25-9  
24016-26-0 24576-05-4 24576-06-5  
24576-07-6 24576-10-1 24576-11-2  
24576-13-4 24628-86-2 24628-88-4  
24639-55-2 24639-56-3  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
(as neoplasm inhibitor)  
RN 24016-22-6 CAPLUS  
CN L-Leucine, N-[3-bromo-4-(4-methoxyphenyl)-1,4-dioxo-2-butenyl]-, ethyl ester (9CI) (CA INDEX NAME)

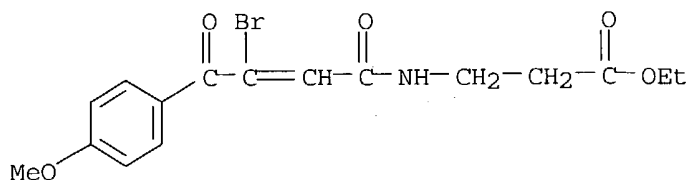
Absolute stereochemistry.  
Double bond geometry unknown.



RN 24016-24-8 CAPLUS  
CN  $\beta$ -Alanine, N-[3-bromo-4-(4-methoxyphenyl)-1,4-dioxo-2-butenyl]-, ethyl ester (9CI) (CA INDEX NAME)

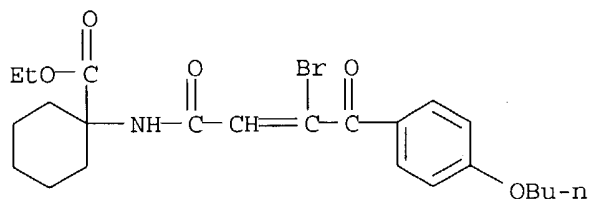


10/689,307



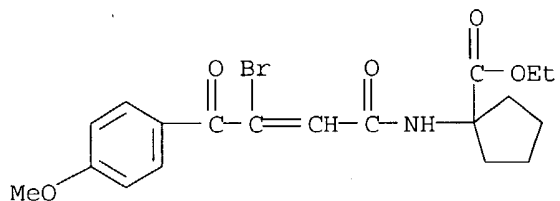
RN 24016-25-9 CAPLUS

CN Cyclohexanecarboxylic acid, 1-[[3-bromo-4-(4-butoxyphenyl)-1,4-dioxo-2-butenyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



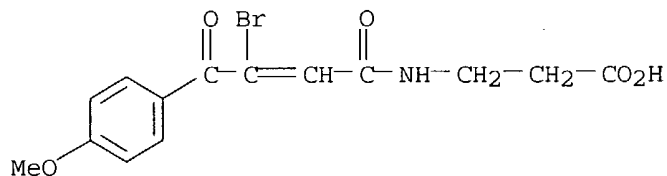
RN 24016-26-0 CAPLUS

CN Cyclopentanecarboxylic acid, 1-[[3-bromo-4-(4-methoxyphenyl)-1,4-dioxo-2-butenyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



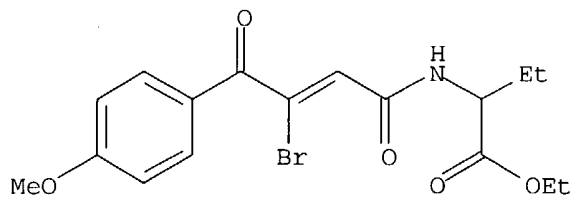
RN 24576-05-4 CAPLUS

CN  $\beta$ -Alanine, N-[3-bromo-4-(4-methoxyphenyl)-1,4-dioxo-2-butenyl]- (9CI) (CA INDEX NAME)



RN 24576-06-5 CAPLUS

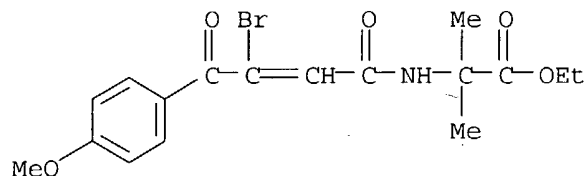
CN Butanoic acid, 2-[[3-bromo-4-(4-methoxyphenyl)-1,4-dioxo-2-butenyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



10/689,307

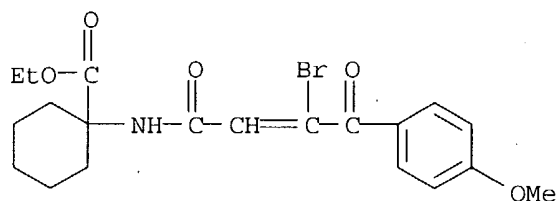
RN 24576-07-6 CAPLUS

CN Alanine, N-[3-bromo-4-(4-methoxyphenyl)-1,4-dioxo-2-butenyl]-2-methyl-, ethyl ester (9CI) (CA INDEX NAME)



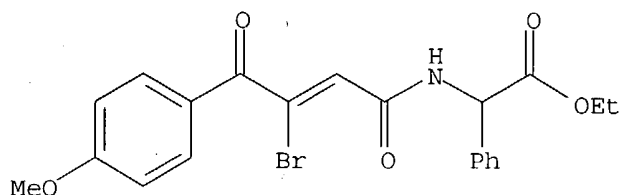
RN 24576-10-1 CAPLUS

CN Cyclohexanecarboxylic acid, 1-[[3-bromo-4-(4-methoxyphenyl)-1,4-dioxo-2-butenyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



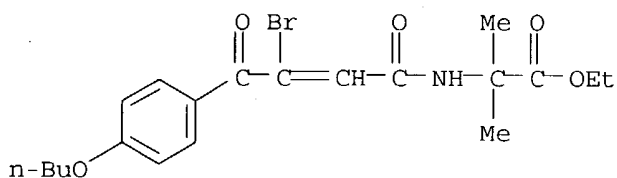
RN 24576-11-2 CAPLUS

CN Benzeneacetic acid,  $\alpha$ -[[3-bromo-4-(4-methoxyphenyl)-1,4-dioxo-2-butenyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



RN 24576-13-4 CAPLUS

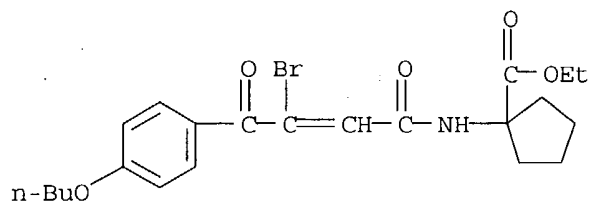
CN Alanine, N-[3-bromo-4-(4-butoxyphenyl)-1,4-dioxo-2-butenyl]-2-methyl-, ethyl ester (9CI) (CA INDEX NAME)



RN 24628-86-2 CAPLUS

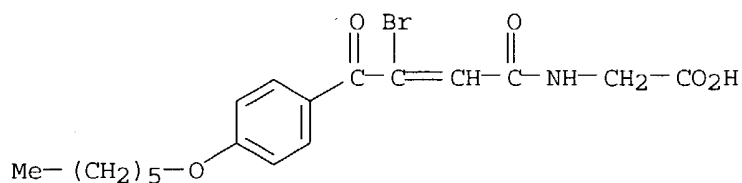
CN Cyclopentanecarboxylic acid, 1-[[3-bromo-4-(4-butoxyphenyl)-1,4-dioxo-2-butenyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)

10/689,307



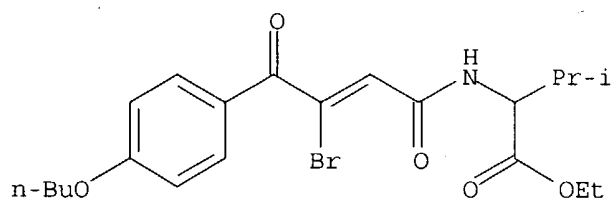
RN 24628-88-4 CAPLUS

CN Glycine, N-[3-bromo-4-[4-(hexyloxy)phenyl]-1,4-dioxo-2-butenyl]- (9CI)  
(CA INDEX NAME)



RN 24639-55-2 CAPLUS

CN Valine, N-[3-bromo-4-(4-butoxyphenyl)-1,4-dioxo-2-butenyl]-, ethyl ester  
(9CI) (CA INDEX NAME)

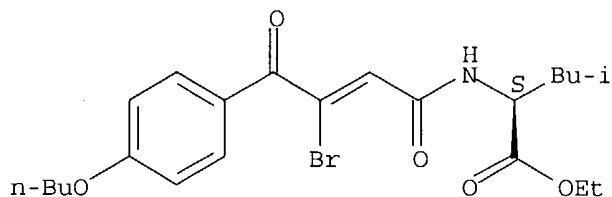


RN 24639-56-3 CAPLUS

CN L-Leucine, N-[3-bromo-4-(4-butoxyphenyl)-1,4-dioxo-2-butenyl]-, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry unknown.

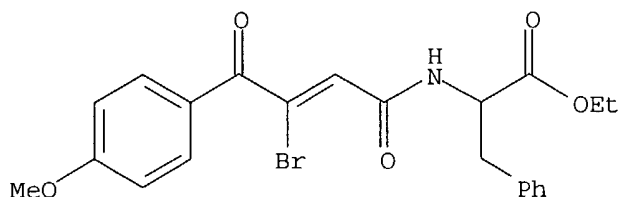


IT 24576-12-3P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 24576-12-3 CAPLUS

CN Phenylalanine, N-[3-bromo-4-(4-methoxyphenyl)-1,4-dioxo-2-butenyl]-, ethyl ester (9CI) (CA INDEX NAME)



L4 ANSWER 20 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1970:3183 CAPLUS

DOCUMENT NUMBER: 72:3183

TITLE: Substances with antineoplastic activity. XXXIV.  
Synthesis and some reactions of  $\gamma$ -aryl- $\gamma$ -  
acyloxy- $\beta$ -halogeno- $\Delta\alpha,\beta$ -  
crotonolactones

AUTHOR(S): Semonsky, Miroslav; Kucharczyk, N.; Zikan, Viktor;  
Jelinek, Vaclav

CORPORATE SOURCE: Vyzk. Ustav Farm. Biochem., Prague, Czech.

SOURCE: Collection of Czechoslovak Chemical Communications  
(1969), 34(11), 3533-9  
CODEN: CCCCAK; ISSN: 0010-0765

DOCUMENT TYPE: Journal

LANGUAGE: English

GI For diagram(s), see printed CA Issue.

AB Refluxing 1.5 hr 0.03 mole  $\gamma$ -alkoxyphenyl- $\alpha,\beta$ -dibromo-  
 $\Delta\alpha,\beta$ -crotonolactone (I) with 0.033 mole Na salt of the  
corresponding carboxylic acid in C<sub>6</sub>H<sub>6</sub> or MeCN gave the following II (X,  
R<sub>1</sub>, R<sub>2</sub>, % yield, and m.p. given): Br, Me, Me (III), 76, 92°  
(cyclohexane); Br, Et, Me, 50, 67.5-8.5° (cyclohexane); Br, Pr, Me,  
68, 70.5-1.0° (cyclohexane); Br, iso-Pr, Me, 52, 61-2.5°  
(heptane); Br, amyl, Me (IV), 41, 48.5-9.5° (hexane); Br, Ph, Me,  
56, 171-3° (MeOH); Br, 3,4-CH<sub>2</sub>O<sub>2</sub>C<sub>6</sub>H<sub>3</sub>, Me, 61, 144-6° (EtOH);  
Cl, Me, Me (V), 67, 78-9° (MeOH); Br, Me, Bu (VI), 64, 78-9°  
(hexane); Br, Me, amyl, 56, 56-7° (MeOH). When 3 g I (alkyl = Me)  
was kept with 6 g p-HOC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>H in 1.1 ml NEt<sub>3</sub> and 52 ml MeCN 12 hr, the  
mixture refluxed 2 hr, and worked up as usual, 0.6 g VII (R = C<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>H-p)  
(VIII) m. 175-7° (EtOH), was obtained. The structure of III was  
confirmed by methanolysis with 0.25% alc. H<sub>2</sub>SO<sub>4</sub> yielding 55% VII (R = Me),  
m. 122.5-4.0° (cyclohexane), and by refluxing with MeOH saturated with  
HCl to give 77% p-MeOC<sub>6</sub>H<sub>4</sub>COCBr:CHCO<sub>2</sub>Me, m. 99-100° (cyclohexane).  
A solution of III in C<sub>6</sub>H<sub>6</sub> was kept with a 10% solution of PrNH<sub>2</sub> in C<sub>6</sub>H<sub>6</sub> 48 hr

to

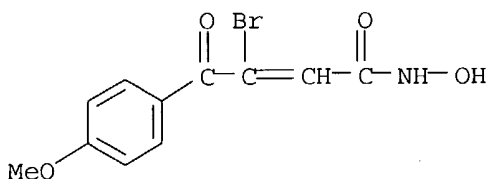
give p-MeOC<sub>6</sub>H<sub>4</sub>COCBr:-CHCONHPr, m. 140° (cyclohexane). Treating 14  
g III in C<sub>6</sub>H<sub>6</sub> with a mixture of 3 g NH<sub>2</sub>OH.HCl, 20 ml MeOH, and 5.9 ml NEt<sub>3</sub>,  
keeping the mixture 30 min, adding another 5.5 ml NEt<sub>3</sub> and chromatog. on a  
silica gel column afforded 2.75 g p-MeOC<sub>6</sub>H<sub>4</sub>-COCBr:CHCONHOH (IX)  
(monohydrate), m. 86-93° (H<sub>2</sub>O). V and IX showed a weak  
cancerostatic effect while IV, VI, VII, and IX prolonged the survival of  
mice with exptl. tumors.

IT 24576-03-2

RL: BAC (Biological activity or effector, except adverse); BSU (Biological  
study, unclassified); BIOL (Biological study)  
(as neoplasm inhibitor)

RN 24576-03-2 CAPLUS

CN Acrylohydroxamic acid, 3-p-anisoyl-3-bromo- (8CI) (CA INDEX NAME)

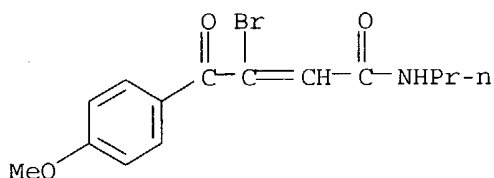


IT 24576-02-1P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 24576-02-1 CAPLUS

CN Acrylamide, 3-p-anisoyl-3-bromo-N-propyl- (8CI) (CA INDEX NAME)



L4 ANSWER 21 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1969:446114 CAPLUS

DOCUMENT NUMBER: 71:46114

TITLE: Cancerostatic agents. XXXVII. Effect of  $\beta$ -aroyl  
 $\beta$ -halogen acrylic acids on tetrahydrofolic acid  
formylaseAUTHOR(S): Slavikova, Vera; Semonsky, M.; Slavik, K.; Zikan, V.;  
Volejnikova, J.

CORPORATE SOURCE: Inst. Hematol. and Blood Transfus., Prauge, Czech.

SOURCE: Biochemical Pharmacology (1969), 18(6), 1455-61

CODEN: BCPA6; ISSN: 0006-2952

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Several derivs. and analogs of  $\beta$ -4-methoxybenzoyl- $\beta$ -bromoacrylic acid (I) have been tested as inhibitors of tetrahydrofolate formylase from pigeon liver and the effect of structural changes on the inhibitory activity has been studied. The inhibitory effect is dependent on a halogen atom in the  $\beta$ -position of the acrylate moiety adjoining the double bond and further by the free carboxyl of the acrylate moiety. Every change in this area leads to complete loss of the inhibitory activity. Substitution of the 4 position in the aromatic nucleus by an alkyl or alkoxy group enhances the inhibitory effect, the length of the aliphatic chain being without considerable effect. Substitution by an acetamido group suppresses the effect considerably. The methylation or methoxylation of the aromatic nucleus in the 2, 3, and 6 positions considerably diminishes the inhibitory activity, but it does not eliminate completely the inhibitory effect. Preincubation of I with tetrahydrofolate formylase does not influence the inhibitory effect; the dialysis of the enzyme-I mixture (either preincubated or not) leads to complete recovery of tetrahydrofolate formylase activity. The inhibition of the enzyme by I and similar substances seems to be completely reversible.

IT 19419-32-0 24576-05-4 24628-88-4

24850-95-1 24850-96-2 24851-00-1

24851-01-2 24851-02-3

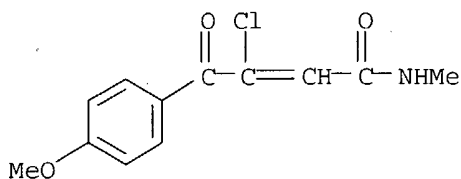
RL: BIOL (Biological study)

(formyltetrahydrofolate synthetase inhibition by)

10/689,307

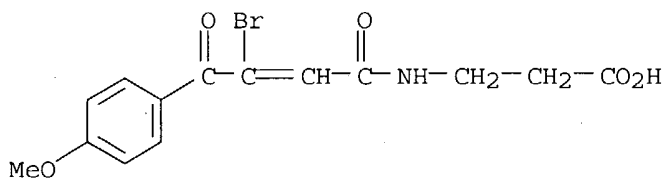
RN 19419-32-0 CAPLUS

CN Acrylamide, 3-p-anisoyl-3-chloro-N-methyl- (7CI, 8CI) (CA INDEX NAME)



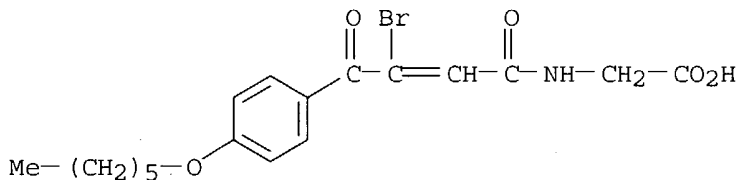
RN 24576-05-4 CAPLUS

CN  $\beta$ -Alanine, N-[3-bromo-4-(4-methoxyphenyl)-1,4-dioxo-2-butenyl]- (9CI)  
(CA INDEX NAME)



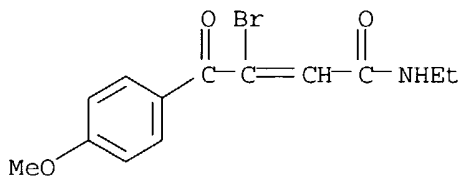
RN 24628-88-4 CAPLUS

CN Glycine, N-[3-bromo-4-[4-(hexyloxy)phenyl]-1,4-dioxo-2-butenyl]- (9CI)  
(CA INDEX NAME)



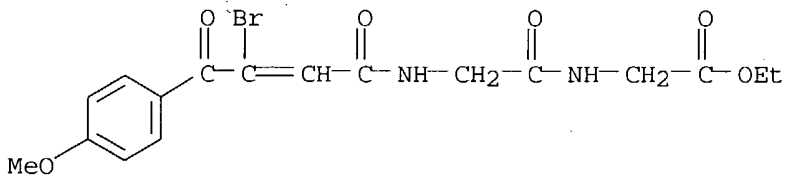
RN 24850-95-1 CAPLUS

CN Acrylamide, 3-p-anisoyl-3-bromo-N-ethyl- (8CI) (CA INDEX NAME)



RN 24850-96-2 CAPLUS

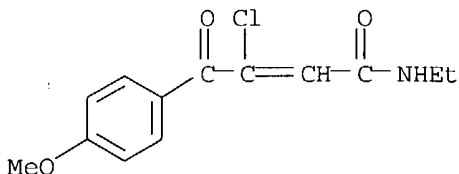
CN Glycine, N-[N-(3-p-anisoyl-3-bromoacryloyl)glycyl]-, ethyl ester (8CI)  
(CA INDEX NAME)



10/689,307

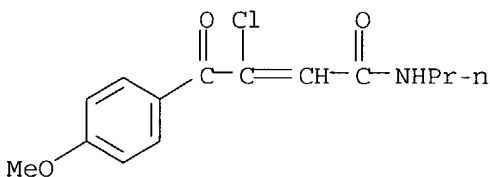
RN 24851-00-1 CAPLUS

CN Acrylamide, 3-p-anisoyl-3-chloro-N-ethyl- (7CI, 8CI) (CA INDEX NAME)



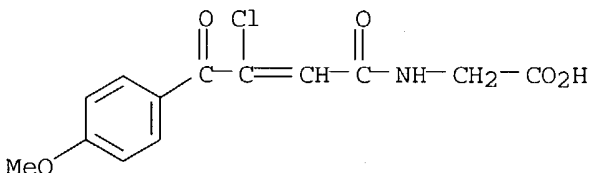
RN 24851-01-2 CAPLUS

CN Acrylamide, 3-p-anisoyl-3-chloro-N-propyl- (7CI, 8CI) (CA INDEX NAME)



RN 24851-02-3 CAPLUS

CN Glycine, N-(3-p-anisoyl-3-chloroacryloyl)- (8CI) (CA INDEX NAME)



L4 ANSWER 22 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1969:96358 CAPLUS

DOCUMENT NUMBER: 70:96358

TITLE: Substances with antineoplastic activity. XXXI.

Amides of cis-  $\beta$ -(p-methoxybenzoyl)- $\beta$ -bromoacrylic acid (cis Br; H) and of its  $\beta$ -chloro analog

AUTHOR(S): Zikan, Viktor; Cerny, Antonin; Semonsky, Miroslav

CORPORATE SOURCE: Vyzk. Ustav Farm. Biochem., Prague, Czech.

SOURCE: Collection of Czechoslovak Chemical Communications (1969), 34(4), 1343-7

CODEN: CCCCAK; ISSN: 0010-0765

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A suspension of 0.01 mole  $\gamma$ -(4-methoxyphenyl)- $\gamma$ -methoxy- $\beta$ -bromo- $\gamma$ -crotonolactone (or its  $\beta$ -chloro analog) in 15 ml. EtOH treated at 5° with a solution of 0.05 mole the corresponding amino compound in 20 ml. EtOH, the mixture kept at room temperature 6 days, poured into

H<sub>2</sub>O, and brought to pH 5-6 gave the following p-MeOC<sub>6</sub>H<sub>4</sub>COCR':CHCONHR (R, R', m.p., and % yield given): H, Br (I), 118-20° (CHCl<sub>3</sub>), 90; Et, Br, 156-7° (C<sub>6</sub>H<sub>6</sub>-Me<sub>2</sub>CO), 92; Pr, Br, 145-6° (C<sub>6</sub>H<sub>6</sub>), 77; Bu, Br, 125-6° (C<sub>6</sub>H<sub>6</sub>), 93; CH<sub>2</sub>:CHCH<sub>2</sub>, Br, 138-40° (C<sub>6</sub>H<sub>6</sub>-Me<sub>2</sub>CO), 87; H<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>, Br (II), 145-8°, 42; HOCH<sub>2</sub>CH<sub>2</sub>, Br, 155-6°

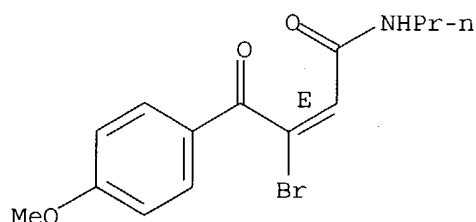
(EtOAc), 99; EtOCOCH<sub>2</sub>, Br (III), 140-1° (aqueous EtOH), 98; iso-Pr, Cl, 147-9° (C<sub>6</sub>H<sub>6</sub>), 86; CH<sub>2</sub>:CHCH<sub>2</sub>, Cl, 127-9° (C<sub>6</sub>H<sub>6</sub>-hexane), 88; HOCH<sub>2</sub>CH<sub>2</sub>, Cl, 146-7° (EtOH-hexane), 98; and EtOCOCH<sub>2</sub>, Cl (IV), 115-16° (Me<sub>2</sub>CO-hexane), 76. II was accompanied by 9% N,N'-bis[β-(p-methoxybenzoyl)-β-bromoacryloyl] ethylenediamine, m. 201-2° (aqueous EtOH). A solution of 5.7 g. p-MeOC<sub>6</sub>H<sub>4</sub>COCBr:CHCO<sub>2</sub>H (V) in 24 ml. HCONMe<sub>2</sub> treated dropwise at 0° with 2.62 g. SOCl<sub>2</sub>, the mixture kept 24 hrs. at 0°, treated dropwise with 6.8 g. piperidine in 5 ml. HCONMe<sub>2</sub>, kept at 0° overnight, and poured on ice gave 58% V-piperidide, m. 104-5° (EtOAc). Saponification of III and IV, resp., at room temperature with aqueous-methanolic NaOH gave after acidification 99% p-Me-OC<sub>6</sub>H<sub>4</sub>COCBr:CHCONHCH<sub>2</sub>CO<sub>2</sub>H, m. 171-2° (aqueous EtOH), and 95% p-MeOC<sub>6</sub>H<sub>4</sub>COCCL:CHCONHCH<sub>2</sub>CO<sub>2</sub>H, m. 218-20° (H<sub>2</sub>O). A mixture of 1.42 g. I, 0.06 g. Na<sub>2</sub>CO<sub>3</sub>, and 0.9 g. 36.7% aqueous HCHO heated 1 min. on a steam bath, diluted with 5 ml. H<sub>2</sub>O, and heated 10 min. gave 43% p-MeOC<sub>6</sub>H<sub>4</sub>COCBr:CHCONHCH<sub>2</sub>OH (VI), m. 177-8° (Me<sub>2</sub>CO). The Cl analog of VI, m. 169-71° (Me<sub>2</sub>CO), was prepared analogously (yield 94%). The amides showed a lower antineoplastic activity than the corresponding free acids.

IT 22242-21-3P 22242-22-4P 22242-23-5P  
 22252-29-5P 22252-30-8P 22252-31-9P  
 22252-32-0P 22252-33-1P 22252-34-2P  
 22252-35-3P 22252-37-5P 22267-83-0P  
 22267-84-1P 22268-25-3P 22268-26-4P  
 22344-53-2P 22344-54-3P 22344-55-4P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)

RN 22242-21-3 CAPLUS

CN Acrylamide, 3-p-anisoyl-3-bromo-N-propyl-, (E)- (8CI) (CA INDEX NAME)

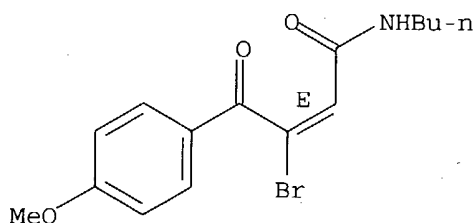
Double bond geometry as shown.



RN 22242-22-4 CAPLUS

CN Acrylamide, 3-p-anisoyl-3-bromo-N-butyl-, (E)- (8CI) (CA INDEX NAME)

Double bond geometry as shown.



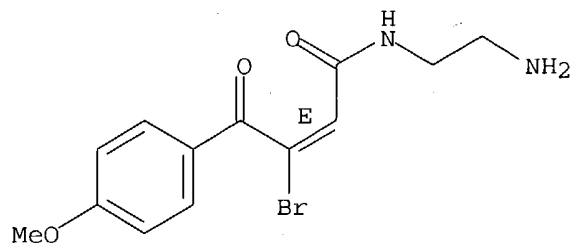
RN 22242-23-5 CAPLUS

CN Acrylamide, N-(2-aminoethyl)-3-p-anisoyl-3-bromo-, (E)- (8CI) (CA INDEX NAME)

Double bond geometry as shown.

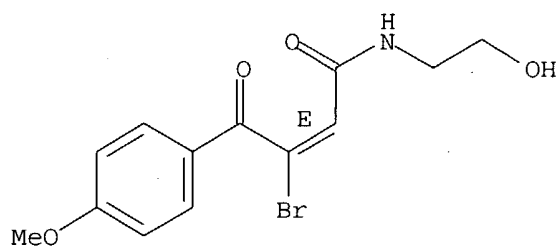


10/689,307



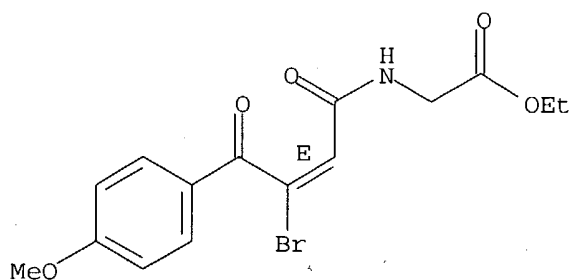
RN 22252-29-5 CAPLUS  
CN Acrylamide, 3-p-anisoyl-3-bromo-N-(2-hydroxyethyl)-, (E)- (8CI) (CA INDEX NAME)

Double bond geometry as shown.



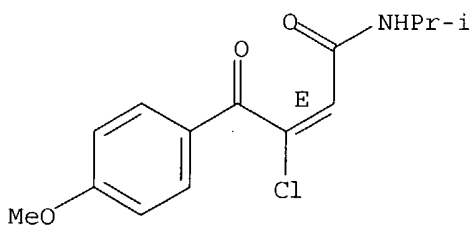
RN 22252-30-8 CAPLUS  
CN Glycine, N-(3-p-anisoyl-3-bromoacryloyl)-, ethyl ester, (E)- (8CI) (CA INDEX NAME)

Double bond geometry as shown.

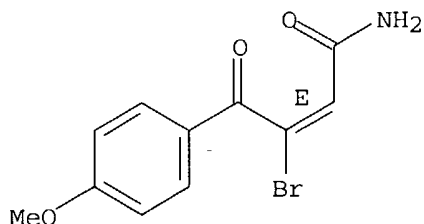


RN 22252-31-9 CAPLUS  
CN Acrylamide, 3-p-anisoyl-3-chloro-N-isopropyl-, (E)- (8CI) (CA INDEX NAME)

Double bond geometry as shown.

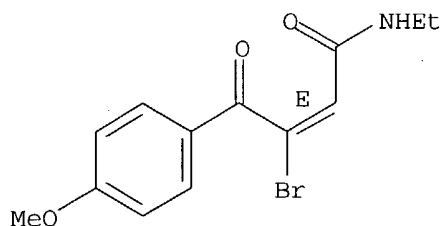


10/689,307



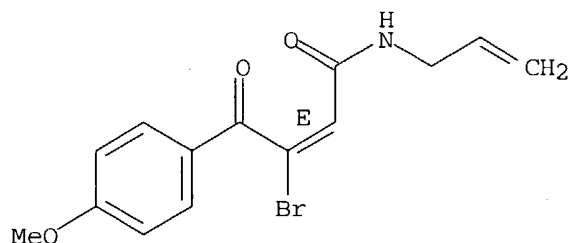
RN 22344-54-3 CAPLUS  
CN Acrylamide, 3-p-anisoyl-3-bromo-N-ethyl-, (E) - (8CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 22344-55-4 CAPLUS  
CN Acrylamide, N-allyl-3-p-anisoyl-3-bromo-, (E) - (8CI) (CA INDEX NAME)

Double bond geometry as shown.



L4 ANSWER 23 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1968:113869 CAPLUS  
DOCUMENT NUMBER: 68:113869  
TITLE: Substances with antineoplastic activity. XXI.  
Spectral and polarographic properties of  
 $\beta$ -(4-methoxybenzoyl)- $\beta$ -bromo- and  
B-chloracrylic acids and related compounds  
AUTHOR(S): Kakac, Bohumil; Mnoucek, K.; Zuman, Petr; Semonsky,  
Miroslav; Zikan, Viktor; Cerny, Antonin  
CORPORATE SOURCE: Vyzk. Ustav Farm. Biochem., Prague, Czech.  
SOURCE: Collection of Czechoslovak Chemical Communications  
(1968), 33(4), 1256-77  
CODEN: CCCCAK; ISSN: 0010-0765  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB Spectroscopic and polarographic behavior of antineoplastically active  
cis- $\beta$ -(4-methoxybenzoyl)- $\beta$ -bromoacrylic acid and its  
- $\beta$ -chloro analog was interpreted by analogy with the Me ester of the  
bromo acids, with the benzoylacrylic and benzoylpropionic acids and with

10/689,307

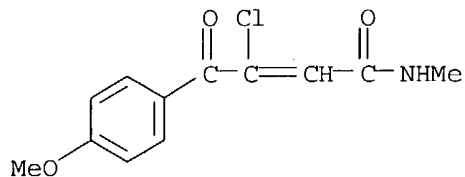
secondary and tertiary amides of the chloro acid. In the physiol. pH range, both antineoplastically active substances exist in the acyclic form. Based on the data obtained, structural problems were discussed at length. Tables of spectral data and E1/2 values were given. 31 references.

IT 19419-32-0 19419-33-1 19419-34-2

RL: PROC (Process)  
(polarography of)

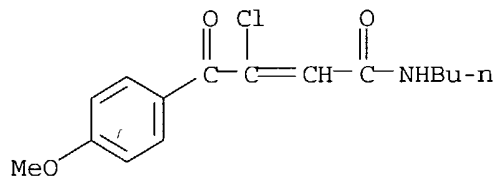
RN 19419-32-0 CAPLUS

CN Acrylamide, 3-p-anisoyl-3-chloro-N-methyl- (7CI, 8CI) (CA INDEX NAME)



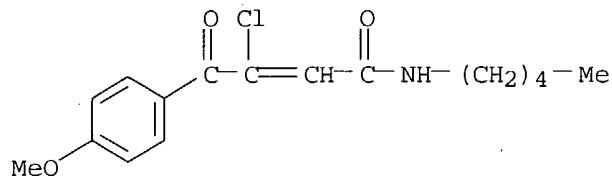
RN 19419-33-1 CAPLUS

CN Acrylamide, 3-p-anisoyl-N-butyl-3-chloro- (7CI, 8CI) (CA INDEX NAME)



RN 19419-34-2 CAPLUS

CN Acrylamide, 3-p-anisoyl-3-chloro-N-pentyl- (7CI, 8CI) (CA INDEX NAME)



L4 ANSWER 24 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1968:105216 CAPLUS

DOCUMENT NUMBER: 68:105216

TITLE: 7-(Substituted propionamido)cephalosporanic acid and derivatives

INVENTOR(S): Takano, Tadayoshi; Hattori, Kiyoshi

PATENT ASSIGNEE(S): Fujisawa Pharmaceutical Co., Ltd.

SOURCE: U.S., 4 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3338896	---	19670829	US	19650310

GI For diagram(s), see printed CA Issue.

AB The title compds. of general formula I where R is aryl, arylcarbonyl, 5-membered heterocyclic; R1 and R2 are H, halogen, or aryl; R3 is halogen; R4 is H or pyridinium; and M is H, a pharmaceutically acceptable non-toxic cation (Na, K, NH4 or organic ammonium cation) or an anionic charge, which are useful antimicrobial agents against a wide variety of microorganisms, may be prepared by reacting 7-aminocephalosporanic acid (7-amino-3-acetoxymethyl-3-cephem-4-carboxylic acid (II) or its derivs. of general formula III with a substituted propionic acid of formula RR1R2CCR3HCO2H or its reactive derivs. under mild conditions. Thus, to a solution containing 540 mg. II and 200 mg. NaHCO3 in 30 cc. aqueous 60% acetone is added 500 mg. 2,3-dichloro-2-phenylpropionyl chloride in 5 cc. acetone, under ice-cooling, the mixture stirred 3 hrs. under ice-cooling, kept overnight, and evaporated in vacuo, the concentrate adjusted to pH 3.0 with H2SO4, the crystals

extracted with ether, the extract distilled in vacuo, the residual material digested with benzene, the saturated solution condensed in vacuo, CHCl3 added, and the liquid is kept in an ice-box to give 265 mg. 7-(2,3-dichloro-3-phenylpropionamido)cephalosporanic acid, m. 157-9°,  $\lambda$  (80% EtOH) 263 m $\mu$  (E 162), Rf 0.86 (BuOH-EtOH-H2O 4:1:5) and Rf 0.85 (BuOH-pyridine-H2O 1:1:1), by upper layer, ascending method; min. inhibitory concentration (MIC): Escherichia coli 40  $\gamma$ /cc., Staphylococcus aureus 0.4  $\gamma$ /cc. Similarly prepared is 7-(2,3-dibromo-3-phenylpropionamido)cephalosporanic acid, m. 84-7° (decomposition),  $\lambda$  (80% EtOH.NaOH) 277 m $\mu$  (E 388), Rf 0.80 (BuOH-EtOH-H2O 4:1:5) and Rf 0.97 (BuOH-pyridine-H2O 1:1:1); MIC: E. coli 40  $\gamma$ /cc., S. aureus 2.5  $\gamma$ /cc. [TABLE OMITTED] Other I similarly prepared are tabulated.

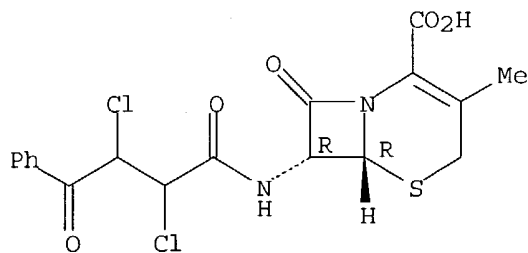
IT 18196-91-3P 18196-92-4P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 18196-91-3 CAPLUS

CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,  
7-(3-benzoyl-2,3-dichloropropionamido)-3-methyl-8-oxo- (8CI) (CA INDEX NAME)

Absolute stereochemistry.

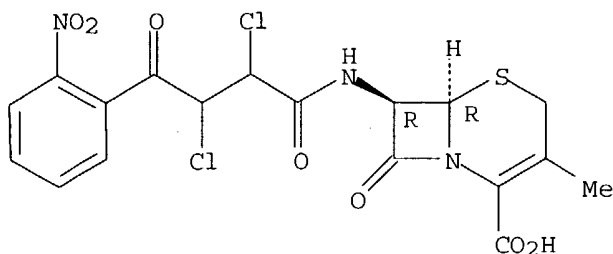


RN 18196-92-4 CAPLUS

CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,  
7-[2,3-dichloro-3-(o-nitrobenzoyl)propionamido]-3-methyl-8-oxo- (8CI) (CA INDEX NAME)

Absolute stereochemistry.

10/689,307



L4 ANSWER 25 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1968:12983 CAPLUS  
DOCUMENT NUMBER: 68:12983  
TITLE: 7-Aminocephalosporanic acid derivatives.  
INVENTOR(S): Takano, Tadayoshi; Nakanishi, Kazuo  
PATENT ASSIGNEE(S): Fujisawa Pharmaceutical Co., Ltd.  
SOURCE: Jpn. Tokkyo Koho, 3 pp.  
CODEN: JAXXAD  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 42010999	B4	19670617	JP	19641212

GI For diagram(s), see printed CA Issue.

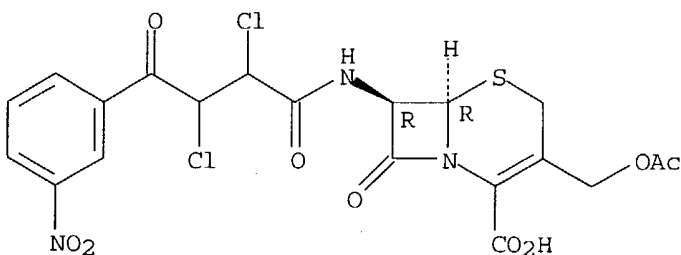
AB Manufacture of 7-[2,3-dichloro-3-(3-nitrobenzoyl)propionamido]cephalosporanic acid (I), useful as bactericide inhibiting growth of *Staphylococcus aureus*, was described. Thus, 610 mg. 2,3-dichloro-3-(3-nitrobenzoyl)propionic acid is dissolved in 22 cc. tetrahydrofuran containing 43 g. dicyclohexyl-carbodiimide, the whole stirred at room temperature, a mixture of 540 mg. 7-aminocephalosporanic acid, 180 mg. NaHCO<sub>3</sub>, 15 cc. H<sub>2</sub>O, and 5 cc. tetrahydrofuran dropped in, the whole stirred at room temperature 6 hrs., kept 2 days, and filtered, tetrahydrofuran removed from the filtrate, the residual solution adjusted to pH 8 with NaHCO<sub>3</sub> and filtered, and the filtrate adjusted to pH 1 with HCl and extracted with AcOEt to give 15 mg. I, m. 95-118° (decomposition).

IT **16461-66-8P**  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 16461-66-8 CAPLUS

CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,  
7-[2,3-dichloro-3-(m-nitrobenzoyl)propionamido]-3-(hydroxymethyl)-8-oxo-,  
acetate (ester) (8CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 26 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1967:454148 CAPLUS  
 DOCUMENT NUMBER: 67:54148  
 TITLE: 7-(Substituted propionamido)cephalosporanic acid and derivatives  
 PATENT ASSIGNEE(S): Fujisawa Pharmaceutical Co., Ltd.  
 SOURCE: Brit., 7 pp.  
 CODEN: BRXXAA  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 1065517		19670419		
DE 1545795			DE	
FR 5395			FR	
JP 42003169		19670000	JP	
PRIORITY APPLN. INFO.:			JP	19640314
			JP	19640723

GI For diagram(s), see printed CA Issue.

AB The title compds. I, which are useful as antimicrobial agents and are resistant to penicillinase and to acids, were prepared by treating 7-aminocephalosporanic acid (II) with a suitably substituted propionic acid or derivative in the presence of a condensing agent. An ice-cooled solution

of 540 mg. II and 200 mg. NaHCO<sub>3</sub> in 30 cc. aqueous Me<sub>2</sub>CO (60%) was treated with a solution of 500 mg. PhCHClCHClCOCl (III) in 5 cc. Me<sub>2</sub>CO, stirred 36 hrs., kept overnight, condensed in vacuo, the residual solution adjusted to pH 3 with H<sub>2</sub>SO<sub>4</sub>, the precipitated crystals collected by filtration, the crystals

extracted with Et<sub>2</sub>O, the Et<sub>2</sub>O distilled in vacuo, and the residue treated with C<sub>6</sub>H<sub>6</sub> and CHCl<sub>3</sub> to give 265 mg. I (R = Ph, R<sub>1</sub> = H, R<sub>2</sub> = R<sub>3</sub> = Cl) (Ia), m. 157-9°. Et<sub>3</sub>N and dicyclohexylcarbodiimide were similarly employed as condensing agents. The following I were similarly prepared [R, R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, and m.p. (decomposition) given]: Ph, H, H, Br, 84-7°; thienyl, H, Cl, Cl, 121-4°; p-ClC<sub>6</sub>H<sub>4</sub>, H, Cl, Cl, 109-12°; Ph, H, H, Cl, 141-3°; p-O<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>, H, Cl, Cl, 157-60°; Ph, H, Cl, H, 119-22°; Ph, Cl, Cl, Cl, 125-30°; Ph, H, Br, Br, 105-7°; Ph, H, OMe, Cl, 157-9°; p-ClC<sub>6</sub>H<sub>4</sub>, H, OMe, Cl, 120-3°; Bz, H, H, Cl, 89-93°; Bz, H, Cl, Cl, 66-72°; o-O<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>CO, H, Cl, Cl, 95-118°. A solution of 7-amino-3-pyridiniummethyldecephalosporanic acid inner salt (IV) and III reacted in the presence of NaHCO<sub>3</sub>, the mixture was adjusted to pH 5.5-6.5, treated with Et<sub>2</sub>O, and the aqueous layer refined through a column packed with an anion-exchange resin to give 7-(2,3-dichloro-3-phenylpropionamido)-3-pyridiniummethyldecephalosporanic acid inner salt, m. 165-70°. Similarly prepared was 7-[2,3-dichloro-3-(p-chlorophenyl)propionamido] - 3 - pyridiniummethyldecephalosporanic acid inner salt, m. 165-70°. A solution of dicyclohexylamine (V) in Me<sub>2</sub>CO was added dropwise to Ia, the mixture kept overnight, and refrigerated to give the V salt of Ia, m. 153-5° (decomposition). The Na salt of Ia was similarly prepared

IT 14785-63-8P 14785-64-9P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

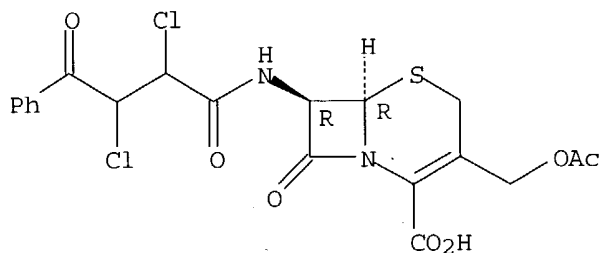
RN 14785-63-8 CAPLUS

CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-(3-benzoyl-2,3-dichloropropionamido)-3-(hydroxymethyl)-8-oxo-, acetate

10/689,307

(ester) (8CI) (CA INDEX NAME)

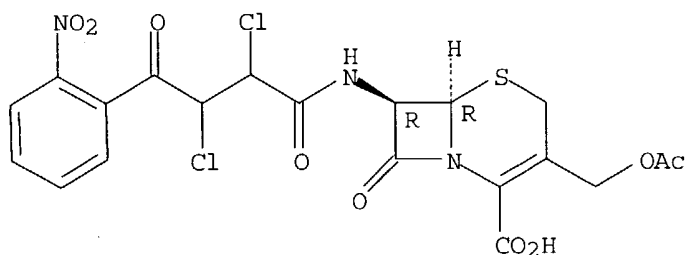
Absolute stereochemistry.



RN 14785-64-9 CAPLUS

CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,  
7-[2,3-dichloro-3-(o-nitrobenzoyl)propionamido]-3-(hydroxymethyl)-8-oxo-,  
acetate (ester) (8CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 27 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1967:454144 CAPLUS

DOCUMENT NUMBER: 67:54144

TITLE: 7-( $\alpha,\beta$ -Unsaturated  
acylamino)cephalosporanic acid and derivatives

PATENT ASSIGNEE(S): Fujisawa Pharmaceutical Co., Ltd.

SOURCE: Brit., 12 pp.

CODEN: BRXXAA

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 1058535		19670215		
DE 1545796			DE	
FR 5396			FR	
JP 41016950		19660000	JP	
JP 43005888		19680000	JP	
JP 44010555		19690000	JP	
US 3453272		19690000	US	
PRIORITY APPLN. INFO.:			JP	19670314
			JP	19640723

GI For diagram(s), see printed CA Issue.

AB The title compds. (I), which are useful as antimicrobial agents and are resistant to penicillinase and acids, were prepared by reacting 7-aminocephalosporanic acid (II) or a derivative of II with a suitable

$\alpha,\beta$ -unsatd. carboxylic acid in the presence of a condensing agent. A solution of 540 mg. II and 130 mg.  $\text{NaHCO}_3$  in 10 cc. 50% aqueous  $\text{Me}_2\text{CO}$  was treated with 0.5 cc. saturated  $\text{NaHCO}_3$  solution, then dropwise with cooling, with a solution of 450 mg.  $\text{PhCH:CHCOCl}$  in 4 cc  $\text{Me}_2\text{CO}$ , the mixture stirred 2 hrs. at room temperature, kept overnight, adjusted to pH 2, extracted with  $\text{EtOAc}$ , and the extract fractionated in vacuo to give 370 mg. I ( $\text{R}_1 = \text{Ph}$ ,  $\text{R}_2 = \text{R}_3 = \text{H}$ ) (Ia), m.  $171-3^\circ$  ( $\text{Me}_2\text{CO}$  and  $\text{H}_2\text{O}$ ). The following I were similarly prepared ( $\text{R}_1$ ,  $\text{R}_2$ ,  $\text{R}_3$ , and m.p. given): o- $\text{O}_2\text{NC}_6\text{H}_4$ , H, H,  $94-102^\circ$  (decomposition); m- $\text{O}_2\text{NC}_6\text{H}_4$ , H, H,  $115-25^\circ$  (decomposition); p- $\text{O}_2\text{NC}_6\text{H}_4$ , H, H, -; o- $\text{ClC}_6\text{H}_4$ , H, H,  $193-4^\circ$ ; p- $\text{ClC}_6\text{H}_4$ , H, H,  $178-85^\circ$  (decomposition); Ph, Cl, H,  $125-30^\circ$  (decomposition); Ph, Br, Br,  $98-106^\circ$  (decomposition); p- $\text{O}_2\text{NC}_6\text{H}_4$ , H, 1-cyclohexenyl,  $64-84^\circ$  (decomposition);  $\text{O}_2\text{NC}_6\text{H}_4$ , H, Ph, (Ib), -; H, Ph, Ph,  $111-14^\circ$  (decomposition); H, 2-trienyl, H,  $154-6^\circ$  (decomposition); H, 2-thienyl, Me,  $145-8^\circ$ ; H, 2-thienyl, Ph,  $95-8^\circ$ ; H, 2-furyl, H, -, H, 5-nitro-2-furyl, H,  $150^\circ$  (decomposition); H, 2-furyl, Ph,  $116-19^\circ$  (decomposition); H, 2-furyl, 1-cyclohexenyl,  $98-104^\circ$  (decomposition); H, 2-thienyl, 1-cyclohexenyl, -, H, Bz, H,  $96-120^\circ$  (decomposition); H, m- $\text{O}_2\text{NC}_6\text{H}_4\text{CO}$ , H,  $180^\circ$  (decomposition); Cl, Bz, H,  $115-20^\circ$  (decomposition); Me, PhO, H,  $77^\circ$  (decomposition); H, PhS, Cl,  $198-208^\circ$  (decomposition); Me, PhS, H,  $75-84^\circ$  (decomposition); Me, 2-thienylthio, H,  $75-89^\circ$ , -;  $\text{MeCH:CH}$ , H, H,  $146-58^\circ$  (decomposition). A solution of 300 mg. Ia in  $\text{Me}_2\text{CO}$  was treated with  $\text{C}_5\text{H}_5\text{N}$  and kept 30 hrs. at  $37-40^\circ$  in a current of N with intermittent shaking. The mixture was treated with  $\text{EtOAc}$ , the aqueous layer condensed in vacuo, the residue dissolved in  $\text{H}_2\text{O}$ , and purified through a column packed with an ion exchange resin to give 170 mg. 7-cinnamideo-3-(pyridiniummethyl)decephalosporanic acid inner salt, m.  $190-2^\circ$  (decomposition). Similarly prepared was 7-cinnamido-3-(2-aminopyridiniummethyl)decephalosporanic acid inner salt, m.  $160-3^\circ$  (decomposition). An aqueous solution of Ia was treated dropwise with a solution of dicyclohexylamine (III) in  $\text{Me}_2\text{CO}$  at room temperature under vigorous stirring and then refrigerated to give the III salt of Ia, m.  $201-3^\circ$  (decomposition). Similarly prepared were the dibenzylethylenediamine salt of Ia, m.  $174-6^\circ$  (decomposition); the Na salt of Ia, m.  $182-200^\circ$  (decomposition); and the III salt of Ib, m.  $123-31^\circ$  (decomposition).

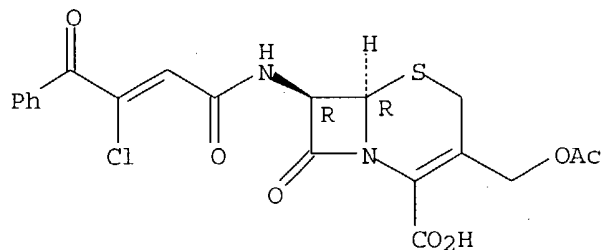
IT **14834-52-7P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 14834-52-7 CAPLUS

CN 5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,  
7-(3-benzoyl-3-chloroacrylamido)-3-(hydroxymethyl)-8-oxo-, acetate (ester)  
(8CI) (CA INDEX NAME)

Absolute stereochemistry.  
Double bond geometry unknown.

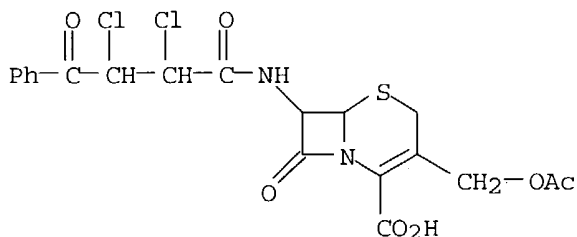




10/689,307

ACCESSION NUMBER: 1967:65463 CAPLUS  
DOCUMENT NUMBER: 66:65463  
TITLE: 7-Aminocephalosporanic acid derivatives  
INVENTOR(S): Takano, Tadayoshi; Hattori, Kiyoshi; Kishimoto, Teiji  
PATENT ASSIGNEE(S): Fujisawa Pharmaceutical Co., Ltd.  
SOURCE: Jpn. Tokkyo Koho, 3 pp.  
CODEN: JAXXAD  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	-----
	JP 41017463	B4	19641004	JP	19640723
GI	For diagram(s), see printed CA Issue.				
AB	Manufacture of I, useful as antibacterial drugs resistant to acid and penicillinase, by the reaction of 7-aminocephalosporanic acid (II) with BzCR1HCR2-HCO2H (III) is described. In an example, a solution of 590 mg. III (R1 = R2 = H) in 15 cc. CHCl3 is gradually added to a cold (0-5°) mixture of 816 mg. II, 50 cc. CHCl3, and 1.5 cc. Et3N, the whole stirred at 0-5° for 30 min., then at room temperature for 3 hrs. more, kept overnight, adjusted to pH 1.0 with 5% HCl, washed with H2O, and evaporated to give 480 mg. I (R1 = R2 = H), m. 83-90° (decomposition). Similarly prepared are the following I (R1, R2, and m.p. given): H, Cl, 89-93°; Cl, Cl, 66-72° (decomposition).				
IT	<b>14346-04-4P</b> RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)				
RN	14346-04-4 CAPLUS				
CN	5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-(3-benzoyl-2,3-dichloropropionamido)-3-(hydroxymethyl)-8-oxo-, acetate (ester) (8CI) (CA INDEX NAME)				



L4 ANSWER 29 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1964:94151 CAPLUS  
DOCUMENT NUMBER: 60:94151  
ORIGINAL REFERENCE NO.: 60:5389b-h  
TITLE: Compounds with antineoplastic activity. VI. Aminolysis  
of  $\gamma$ -aryl- $\alpha,\beta$ -dihalo-  
 $\Delta\alpha,\beta$ -crotonolactone; some substituted  
 $\beta$ -aroyl- $\beta$ -haloacrylamides,  
 $\beta$ -aroyl- $\beta$ -halopropionamides, and  
 $\beta$ -aroylpropionamides  
AUTHOR(S): Semonsky, M.; Cerny, A.; Kakac, B.; Subrt, V.  
CORPORATE SOURCE: Vyzkumny Ustav Farm. Biochem., Prague  
SOURCE: Collection of Czechoslovak Chemical Communications  
(1963), 28(12), 3278-89  
CODEN: CCCCAK; ISSN: 0010-0765

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

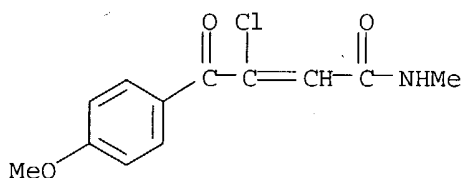
GI For diagram(s), see printed CA Issue.

AB cf. CA 59, 3822c. Reaction of I-V, p-MeOC<sub>6</sub>H<sub>4</sub>COCCl:CHCOCl (VI), and p-MeOC<sub>6</sub>H<sub>4</sub>COCCl:CHCOR [H and Cl cis]

IT 19419-32-0, Acrylamide, 3-p-anisoyl-3-chloro-N-methyl-  
 19419-33-1, Acrylamide, 3-p-anisoyl-N-butyl-3-chloro-  
 19419-34-2, Acrylamide, 3-p-anisoyl-3-chloro-N-pentyl-  
 24851-00-1, Acrylamide, 3-p-anisoyl-3-chloro-N-ethyl-  
 24851-01-2, Acrylamide, 3-p-anisoyl-3-chloro-N-propyl-  
 91349-14-3, Acrylamide, 3-p-anisoyl-3-chloro- 91844-23-4  
 , Acrylamide, 3-p-anisoyl-3-bromo-N-methyl- 93257-49-9,  
 Propionamide, 3-p-anisoyl-3-chloro-N-methyl-2-(methyl-amino)-  
 93320-13-9, Acrylanilide, 3-p-anisoyl-3-chloro- 93868-59-8  
 , Acrylamide, 3-p-anisoyl-N-benzyl-3-chloro- 95319-05-4,  
 Propionanilide, 2-anilino-3-p-anisoyl-3-chloro-  
 (preparation of)

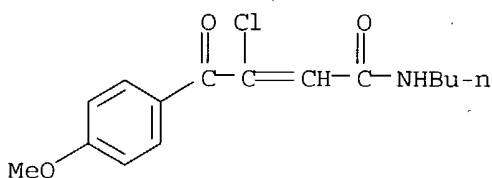
RN 19419-32-0 CAPLUS

CN Acrylamide, 3-p-anisoyl-3-chloro-N-methyl- (7CI, 8CI) (CA INDEX NAME)



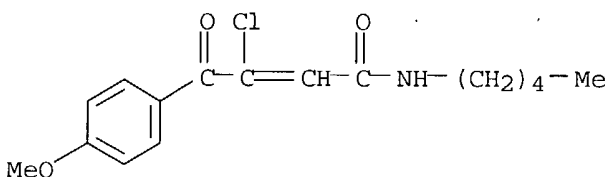
RN 19419-33-1 CAPLUS

CN Acrylamide, 3-p-anisoyl-N-butyl-3-chloro- (7CI, 8CI) (CA INDEX NAME)



RN 19419-34-2 CAPLUS

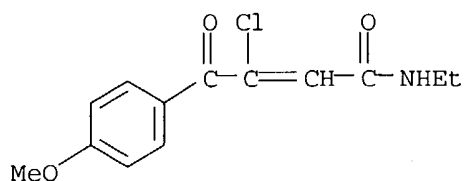
CN Acrylamide, 3-p-anisoyl-3-chloro-N-pentyl- (7CI, 8CI) (CA INDEX NAME)



RN 24851-00-1 CAPLUS

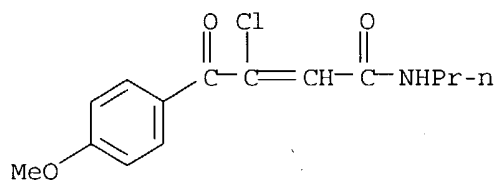
CN Acrylamide, 3-p-anisoyl-3-chloro-N-ethyl- (7CI, 8CI) (CA INDEX NAME)

10/689,307



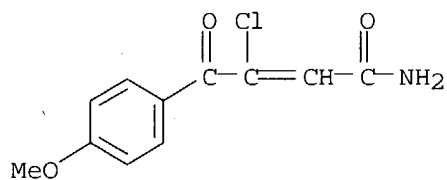
RN 24851-01-2 CAPLUS

CN Acrylamide, 3-p-anisoyl-3-chloro-N-propyl- (7CI, 8CI) (CA INDEX NAME)



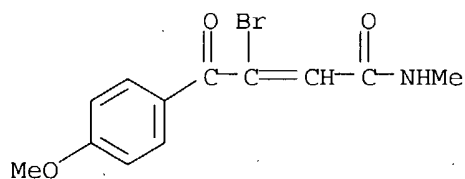
RN 91349-14-3 CAPLUS

CN Acrylamide, 3-p-anisoyl-3-chloro- (7CI) (CA INDEX NAME)



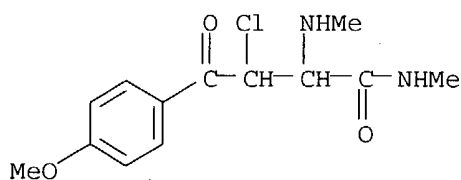
RN 91844-23-4 CAPLUS

CN Acrylamide, 3-p-anisoyl-3-bromo-N-methyl- (7CI) (CA INDEX NAME)



RN 93257-49-9 CAPLUS

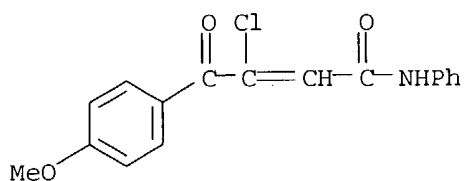
CN Propionamide, 3-p-anisoyl-3-chloro-N-methyl-2-(methylamino)- (7CI) (CA INDEX NAME)



RN 93320-13-9 CAPLUS

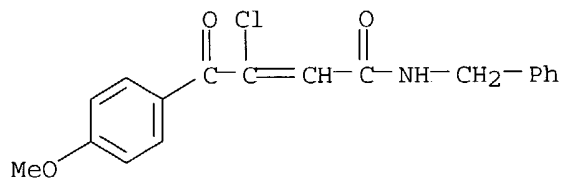
CN Acrylanilide, 3-p-anisoyl-3-chloro- (7CI) (CA INDEX NAME)

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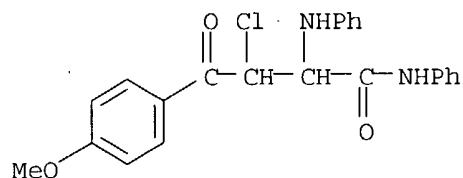
RN 93868-59-8 CAPLUS

CN Acrylamide, 3-p-anisoyl-N-benzyl-3-chloro- (7CI) (CA INDEX NAME)



RN 95319-05-4 CAPLUS

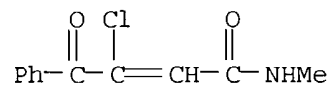
CN Propionanilide, 2-anilino-3-p-anisoyl-3-chloro- (7CI) (CA INDEX NAME)



IT **91348-98-0**, Acrylamide, 3-benzoyl-3-chloro-N-methyl-  
(spectrum of)

RN 91348-98-0 CAPLUS

CN Acrylamide, 3-benzoyl-3-chloro-N-methyl- (7CI) (CA INDEX NAME)



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FILE 'USPATFULL' ENTERED AT 09:08:43 ON 23 NOV 2004

CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

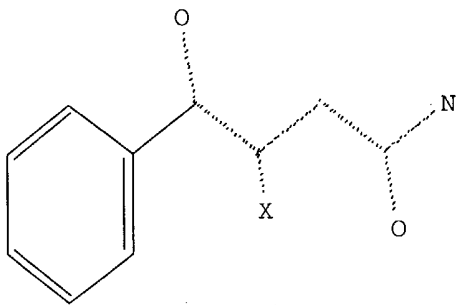
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CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

=> d que

L1 STR

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Structure attributes must be viewed using STN Express query preparation.

L3 111 SEA FILE=REGISTRY SSS FUL L1  
L5 2 SEA L3

=> d l5 1-2 ibib abs hitstr

L5 ANSWER 1 OF 2 USPATFULL on STN

ACCESSION NUMBER: 92:106844 USPATFULL

TITLE: Acryloyl substituted pyrrole derivatives

INVENTOR(S): Mongelli, Nicola, Milan, Italy  
Biasoli, Giovanni, Gavirate, Italy  
Capolongo, Laura, Milan, Italy  
Pezzoni, Gabriella, Milan, Italy

PATENT ASSIGNEE(S): Farmitalia Carlo Erba Srl, Milan, Italy (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5175182		19921229
	WO 9011277		19901004
APPLICATION INFO.:	US 1990-613490		19901105 (7)
	WO 1990-EP471		19900322
			19901105 PCT 371 date
			19901105 PCT 102(e) date

	NUMBER	DATE
PRIORITY INFORMATION:	GB 1989-6709	19890323
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Lee, Mary C.	
ASSISTANT EXAMINER:	McKane, Joseph K.	
LEGAL REPRESENTATIVE:	Nikaido, Marmelstein, Murray & Oram	
NUMBER OF CLAIMS:	6	
EXEMPLARY CLAIM:	1	
LINE COUNT:	458	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to acryloyl substituted pyrrole derivatives of formula (I) ##STR1## wherein n is an integer of 1 to 5;

each of R.sub.1 and R.sub.2, which may be the same or different, is hydrogen, halogen, --CN, --NO.sub.2, C.sub.1 -C.sub.4 alkyl, or a group ##STR2## R.sub.3 is hydrogen, halogen, --CN, or --NO.sub.2; each R.sub.4 is, independently, hydrogen or C.sub.1 -C.sub.4 alkyl;

A is a bond, a group ##STR3## or a group --NH--Het--CO--, wherein Het

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is a saturated or unsaturated pentatomic or hexatomic heteromonocyclic ring; and

B is a group ##STR4## in which m is 1, 2 or 3 and each R.sub.5 is, independently, a C.sub.1 -C.sub.4 alkyl group, and pharmaceutically acceptable salts thereof, which are useful as antineoplastic agents.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 132268-29-2P

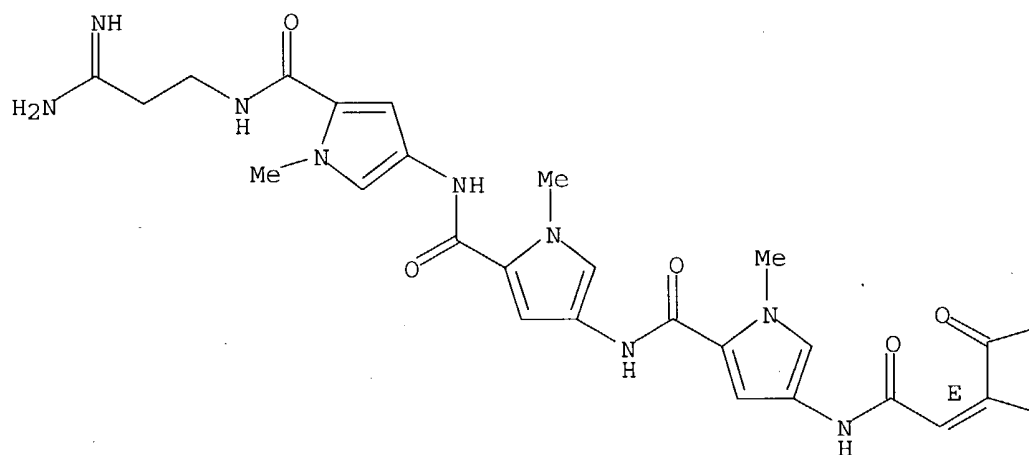
(preparation of, as antineoplastic agent)

RN 132268-29-2 USPATFULL

CN 1H-Pyrrole-2-carboxamide, N-[5-[[[(3-amino-3-iminopropyl)amino]carbonyl]-1-methyl-1H-pyrrol-3-yl]-4-[[[4-[[[3-bromo-4-(4-methoxyphenyl)-1,4-dioxo-2-butenyl]amino]-1-methyl-1H-pyrrol-2-yl]carbonyl]amino]-1-methyl-, monohydrochloride, (E)- (9CI) (CA INDEX NAME)

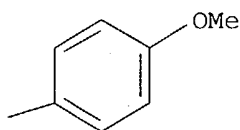
Double bond geometry as shown.

PAGE 1-A



● HCl

PAGE 1-B



—Br

L5 ANSWER 2 OF 2 USPATFULL on STN

ACCESSION NUMBER: 84:12836 USPATFULL  
 TITLE: Substituted N-( $\alpha$ -aroylpropionyl) derivatives of  
 $\alpha$ -amino acids and esters thereof  
 INVENTOR(S): McEvoy, Francis J., Pearl River, NY, United States  
 Albright, Jay D., Nanuet, NY, United States  
 PATENT ASSIGNEE(S): American Cyanamid Company, Stamford, CT, United States  
 (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 4435329		19840306
APPLICATION INFO.:	US 1981-312119		19811016 (6)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Jiles, Henry R.		
ASSISTANT EXAMINER:	Whittenbaugh, Robert C.		
LEGAL REPRESENTATIVE:	Timbers, Mary-Ellen M.		
NUMBER OF CLAIMS:	21		
EXEMPLARY CLAIM:	1		
LINE COUNT:	1252		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Novel compounds are described having the formula ##STR1## wherein Z is ##STR2## R.sub.1 is hydrogen or a C.sub.1 -C.sub.4 lower alkyl; R.sub.2 is hydrogen, a C.sub.1 -C.sub.4 lower alkyl, hydroxy-R.sub.8 -, lower alkyl-R.sub.8 -, mercapto-R.sub.8 -, cyclohexyl, cyclopentyl, phenyl, phenyl-R.sub.8 -, indolyl-R.sub.8 -, carboxy-R.sub.8 -, amino-R.sub.8 - or carbamoyl-R.sub.8 -, wherein R.sub.8 - is a divalent C.sub.1 -C.sub.6 straight chain parafinic moiety; R.sub.3 is hydrogen or C.sub.1 -C.sub.4 lower alkyl; R.sub.4 is hydrogen, lower alkanoyl, benzoyl or phenyl-substituted-lower alkanoyl; R.sub.5 is hydrogen or a C.sub.1 -C.sub.4 lower alkyl; R.sub.1, R.sub.2 and R.sub.5 excluding tertiary butyl; ARYL is 1-naphthyl, 2-naphthyl, 4-chloro-1-naphthyl, 4-methoxy-1-naphthyl, 5,6,7,8-tetrahydro-1-naphthyl, 5,6,7,8-tetrahydro-2-naphthyl, 4-biphenyl, 5-indanyl, 4-indanyl, phenyl, or substituted phenyl moieties having the formula ##STR3## wherein R.sub.6 is fluoro, chloro, bromo, trifluoromethyl, cyano, phenoxy, halophenoxy, phenylthio, halophenylthio, a C.sub.1 -C.sub.4 lower alkyl or a C.sub.1 -C.sub.4 lower alkoxy, and R.sub.7 is chloro, fluoro, bromo, a C.sub.1 -C.sub.4 lower alkyl or a C.sub.1 -C.sub.4 lower alkoxy; and where m is an integer of zero, one or two; including individual optically active isomers; racemic mixtures thereof; non-toxic pharmacologically-acceptable salts of the foregoing; and mixtures of the foregoing. Processes of preparing such compounds are also described. Such compounds are useful in ameliorating hypertension in mammals.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 90471-90-2P

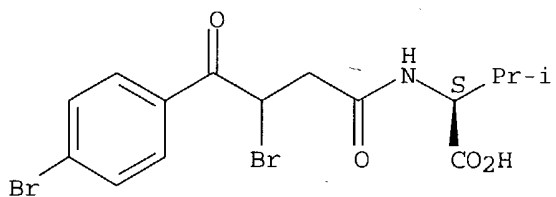
(preparation and reaction of, with potassium thioacetate)

RN 90471-90-2 USPATFULL

CN L-Valine, N-[3-bromo-4-(4-bromophenyl)-1,4-dioxobutyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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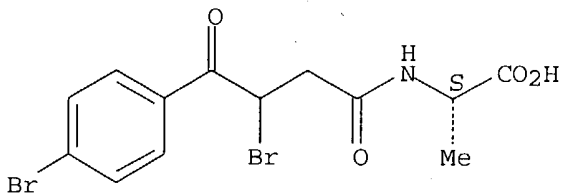
IT 90471-92-4P

(preparation and reaction of, with thioacetate)

RN 90471-92-4 USPATFULL

CN L-Alanine, N-[3-bromo-4-(4-bromophenyl)-1,4-dioxobutyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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